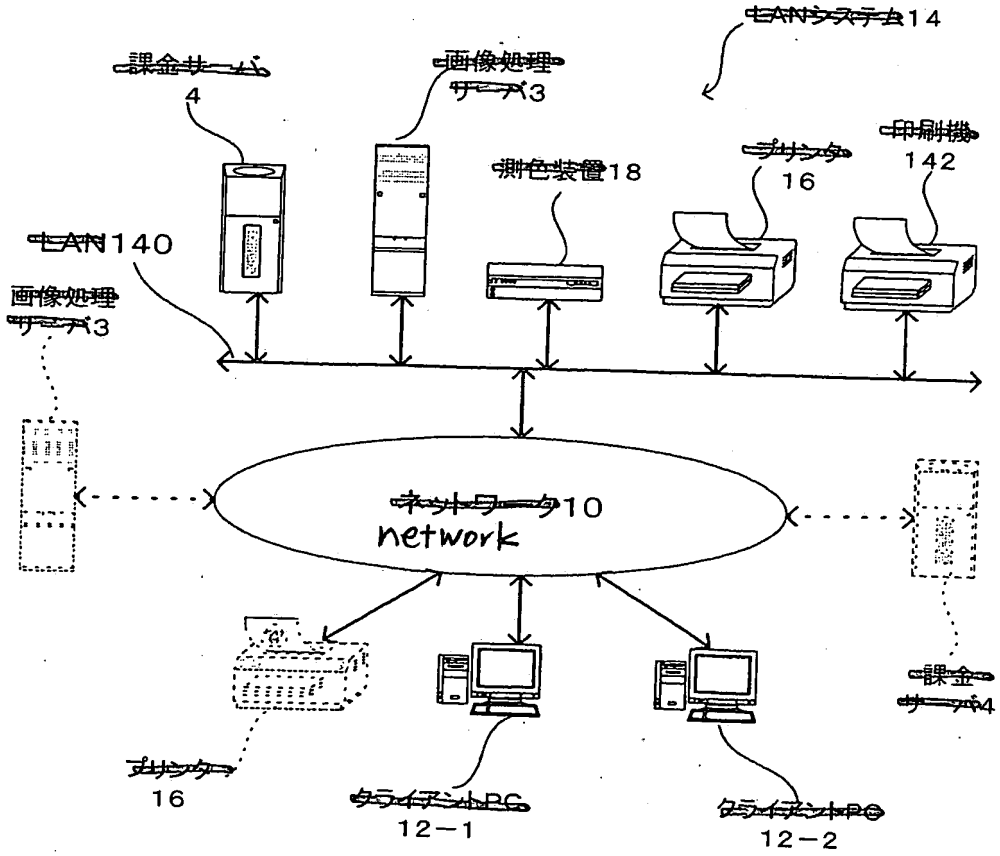
~~【書類名】~~ ~~図面~~

~~【図１】~~

Fig. 1



印刷システム1

~~[図2]~~

Fig. 2

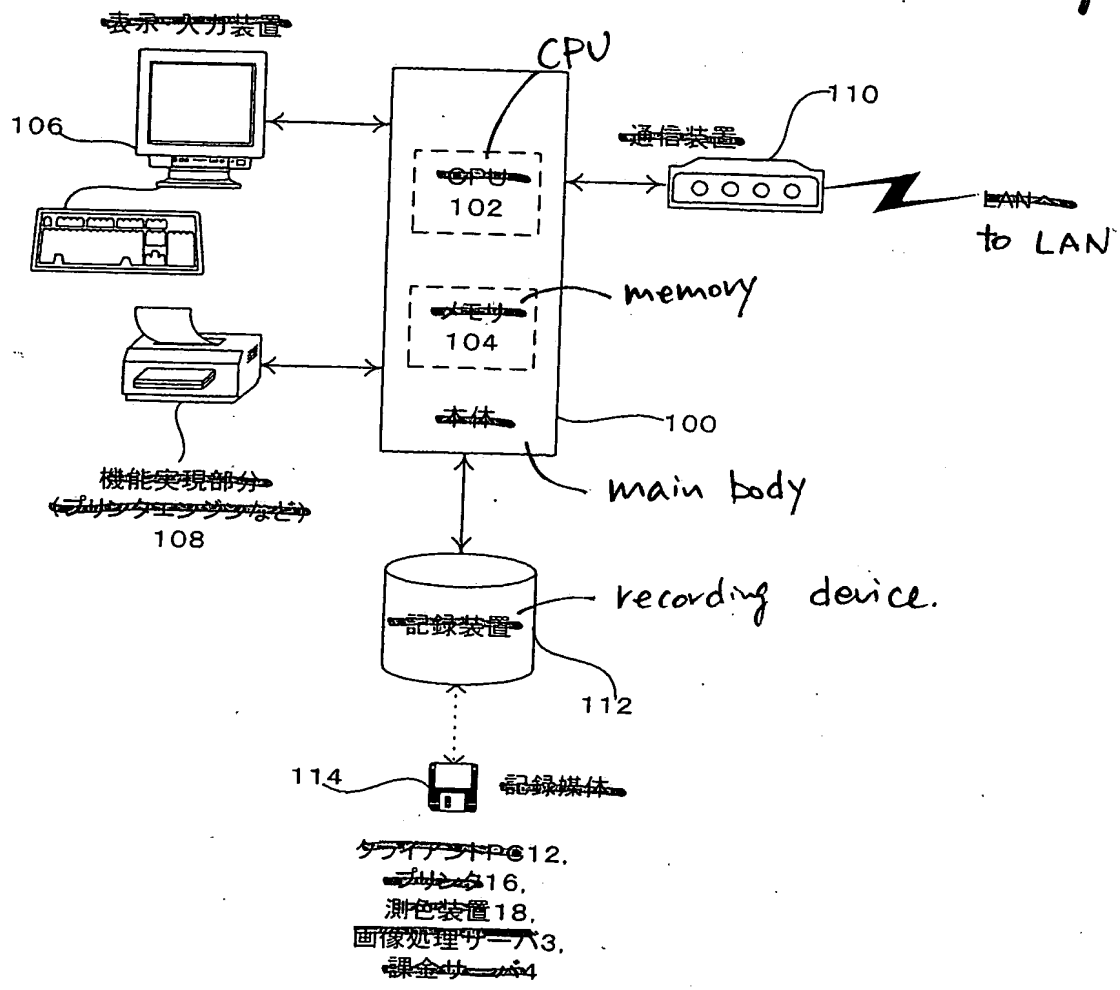
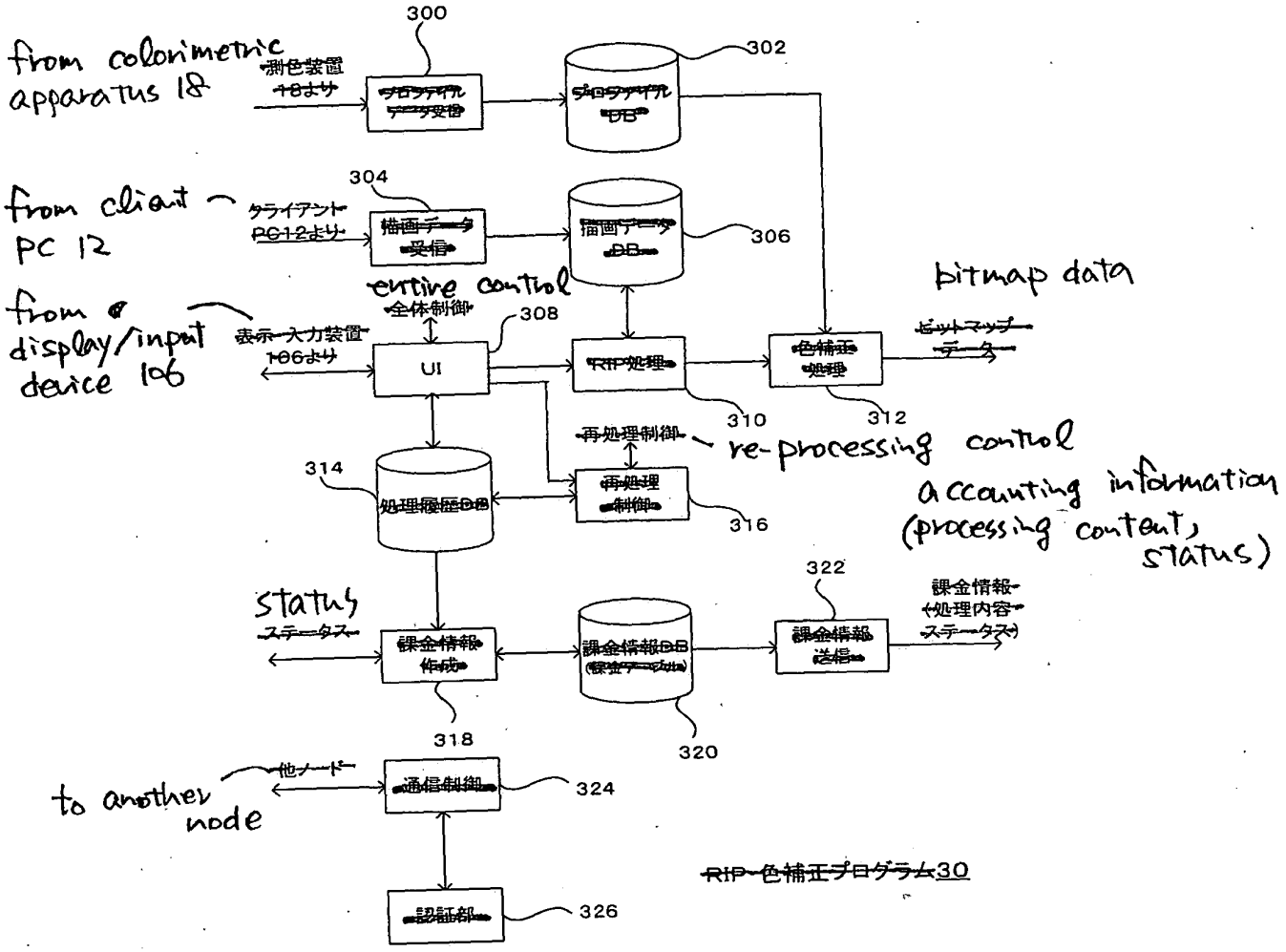

~~表示入力装置~~
106
CPU
~~CPU~~
102
110
~~通信装置~~
~~LAN~~
to LAN
memory
~~メモリ~~
104
~~本体~~
100
main body
~~機能実現部分~~
~~(プリンタエンジンなど)~~
108
recording device.
~~記録装置~~
112
114
~~記録媒体~~
~~タライアントPC~~12,
~~プリンタ~~16,
測色装置18,
画像処理サーバ3,
~~課金サーバ~~4

Fig. 3

300 profile data receiving section
302 profile DB
304 drawing data receiving section
306 drawing data DB
308 user interface section
310 RIP processing section
312 color correcting processing section
314 process history DB
316 re-processing control section
318 accounting information generating section
320 accounting information DB
322 accounting information transmitting section
324 communication control section
326 authentication section

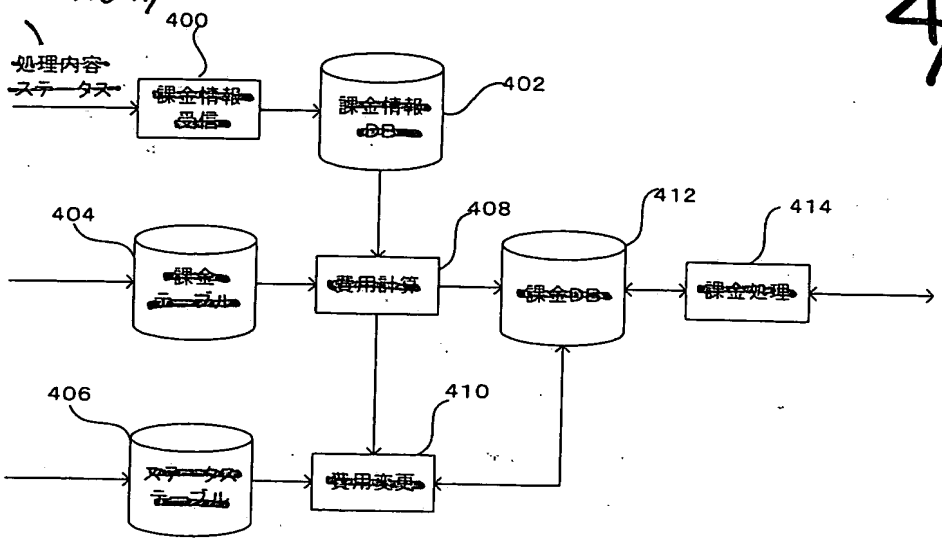
~~【図3】~~



~~RIP色補正プログラム30~~

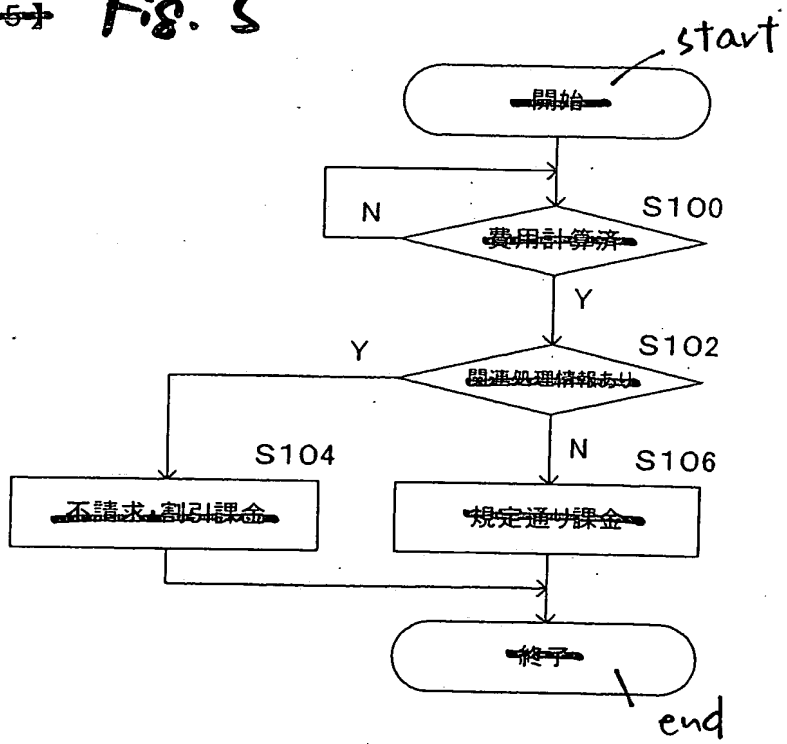
【図4】 Fig. 4

processing content/ status



課金システム40

【図5】 Fig. 5



S10

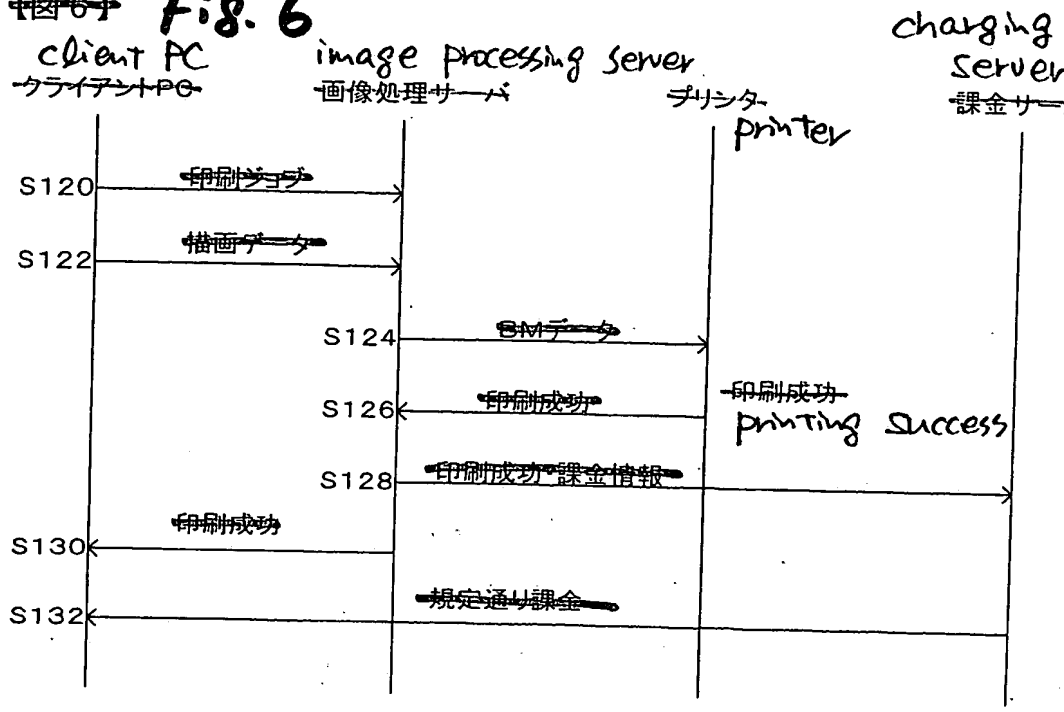
Fig. 4

400 accounting information receiving section
402 accounting information DB
404 accounting table
406 status table
408 fee calculating section
410 fee changing section
412 accounting DB
414 charging processing section

Fig. 5

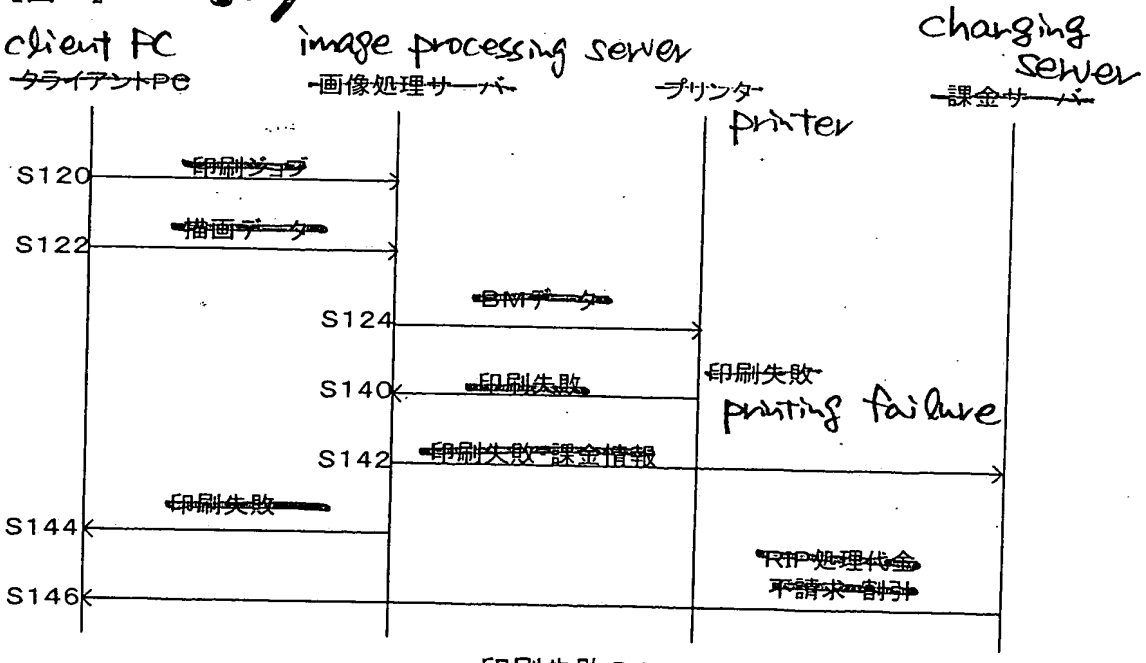
S100 Has a fee already been calculated?
S102 Is related information contained?
S104 not charging or charging with discount
S106 charging a predetermined fee

【図6】 Fig. 6



正常シーケンスS12

【図7】 Fig. 7



印刷失敗S14

Fig. 6

S120 print job

S122 drawing data

S124 bitmap data

S126 printing success

S128 printing success/accounting information

S130 printing success

S132 charging for a predetermined fee

Fig. 7

S120 print job

S122 drawing data

S124 bitmap data

S140 printing failure

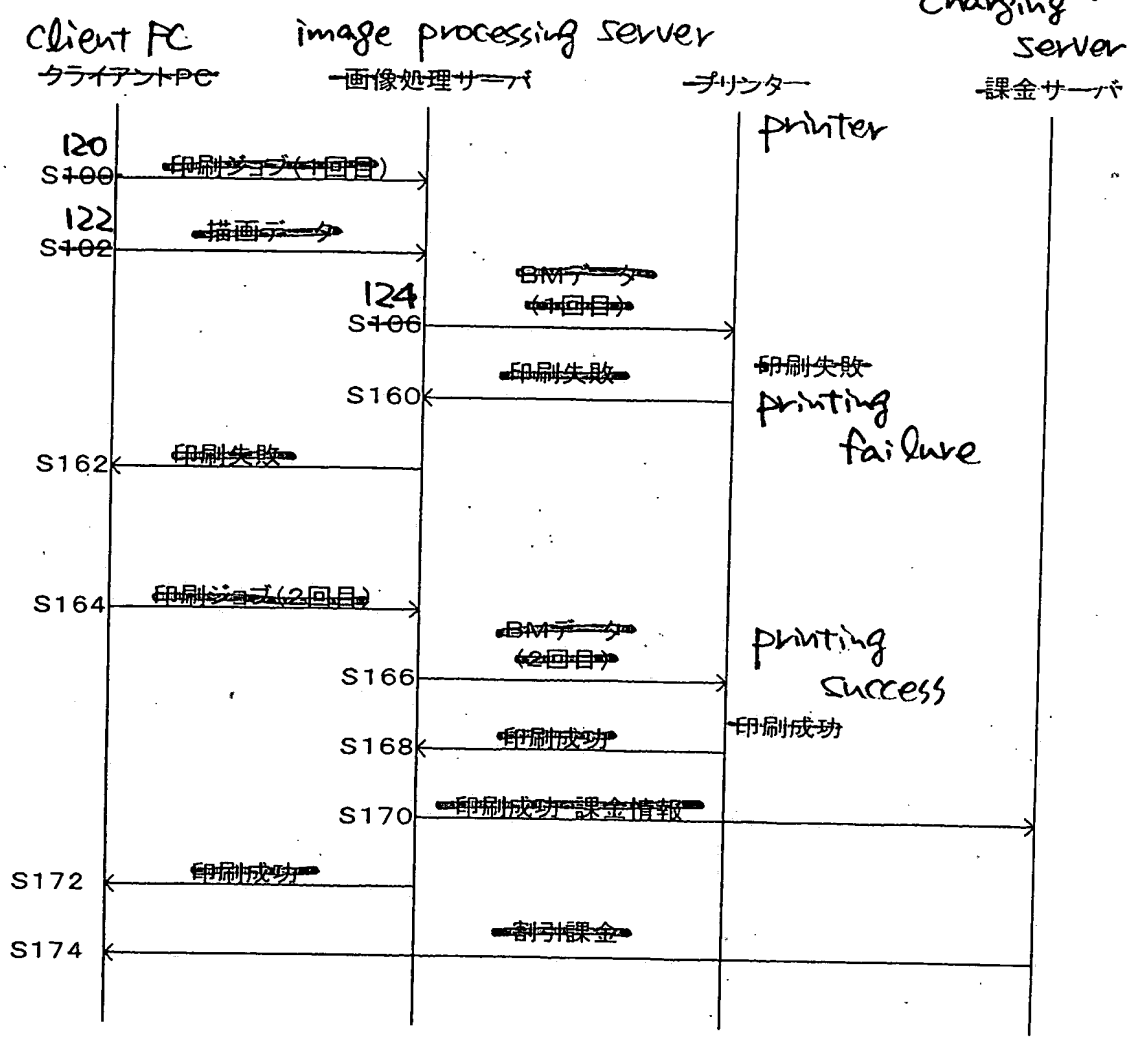
S142 printing failure/accounting information

S144 printing failure

S146 not-charging or discounting an accounting for RIP processing

【図8】

Fig. 8



印刷失敗S16

Fig. 8

S120 print job (first time)

S122 drawing data

S124 bitmap data (first time)

S160 printing failure

S162 printing failure

S164 print job (second time)

S166 bitmap data (second time)

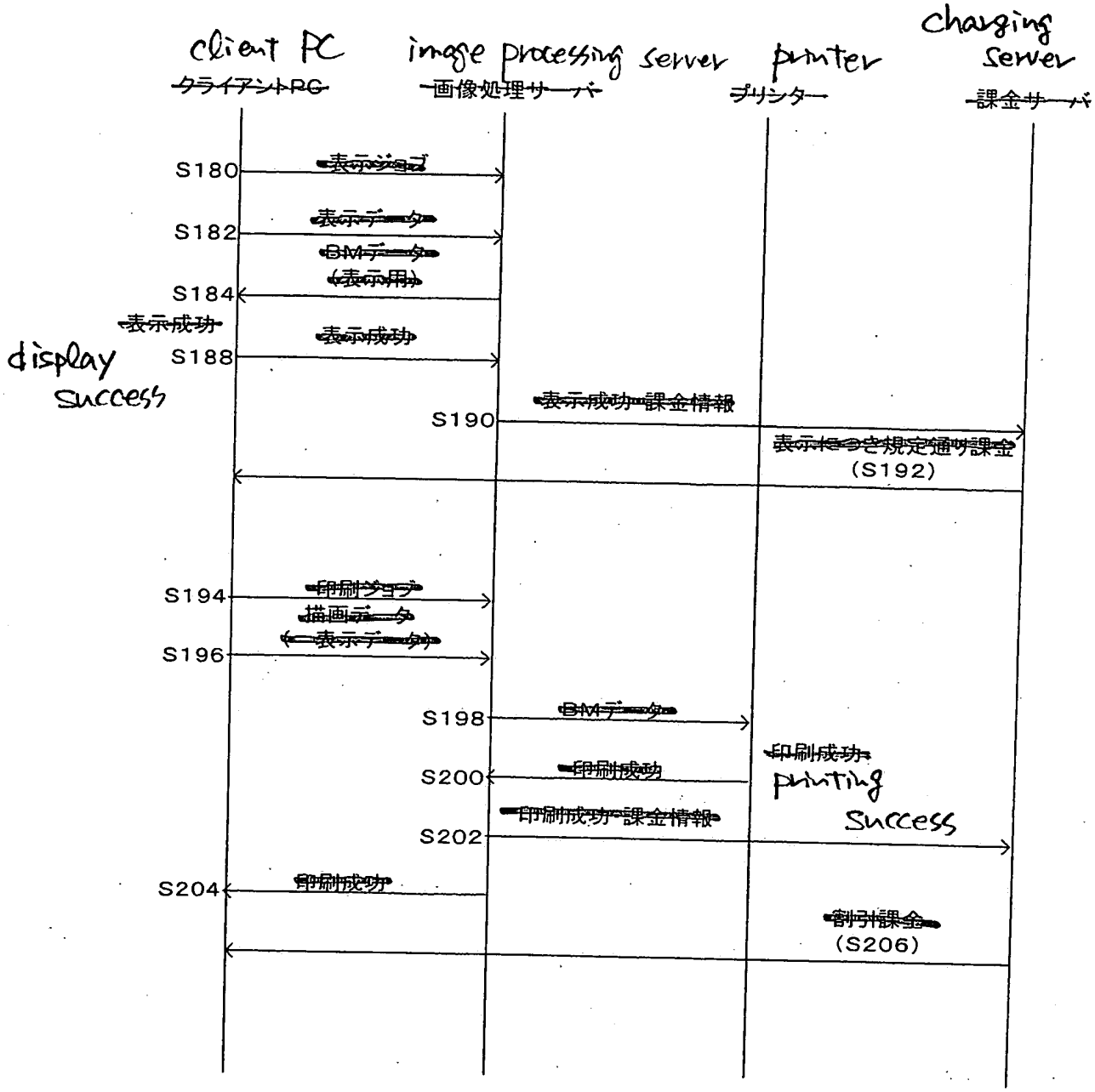
S168 printing success

S170 printing success/accounting information

S172 printing success

S174 charging with discount

~~【図9】~~ Fig. 9


client PC
~~クライアントPC~~
image processing server
~~画像処理サーバ~~
printer
~~プリンター~~
charging server
~~課金サーバ~~
S180
~~表示ジョブ~~
S182
~~表示データ~~
~~BMデータ~~
~~(表示用)~~
S184
~~表示成功~~
display success
S188
~~表示成功~~
S190
~~表示成功 課金情報~~
~~表示ページ数規定通り課金~~
(S192)
S194
~~印刷ジョブ~~
~~描画データ~~
~~(表示データ)~~
S196
S198
~~BMデータ~~
S200
~~印刷成功~~
~~印刷成功~~
printing success
~~印刷成功 課金情報~~
S202
S204
~~印刷成功~~
~~計算課金~~
(S206)

S18

Fig. 9

S180 display job

S182 display job

S184 bitmap data (for display)

S188 display success

S190 display success/accounting information

S192 charging for a predetermined fee for display

S194 print job

S196 drawing data (= display data)

S198 bitmap data

S200 print success

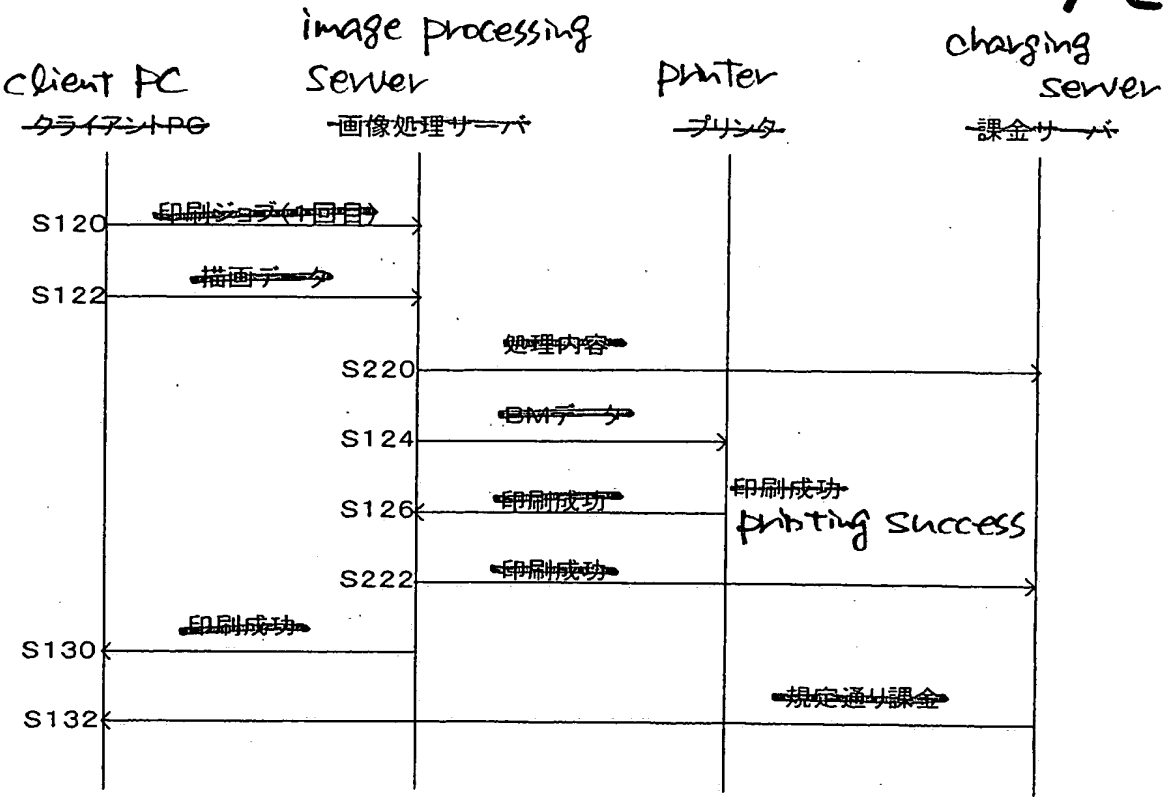
S202 print success/accounting information

S204 print success

S206 charging with discount

~~【図10】~~

Fig. 10



~~正常シーケンス~~ S22

Fig. 10

S120 print job (first time)

S122 drawing data

S220 processing content

S124 bitmap data

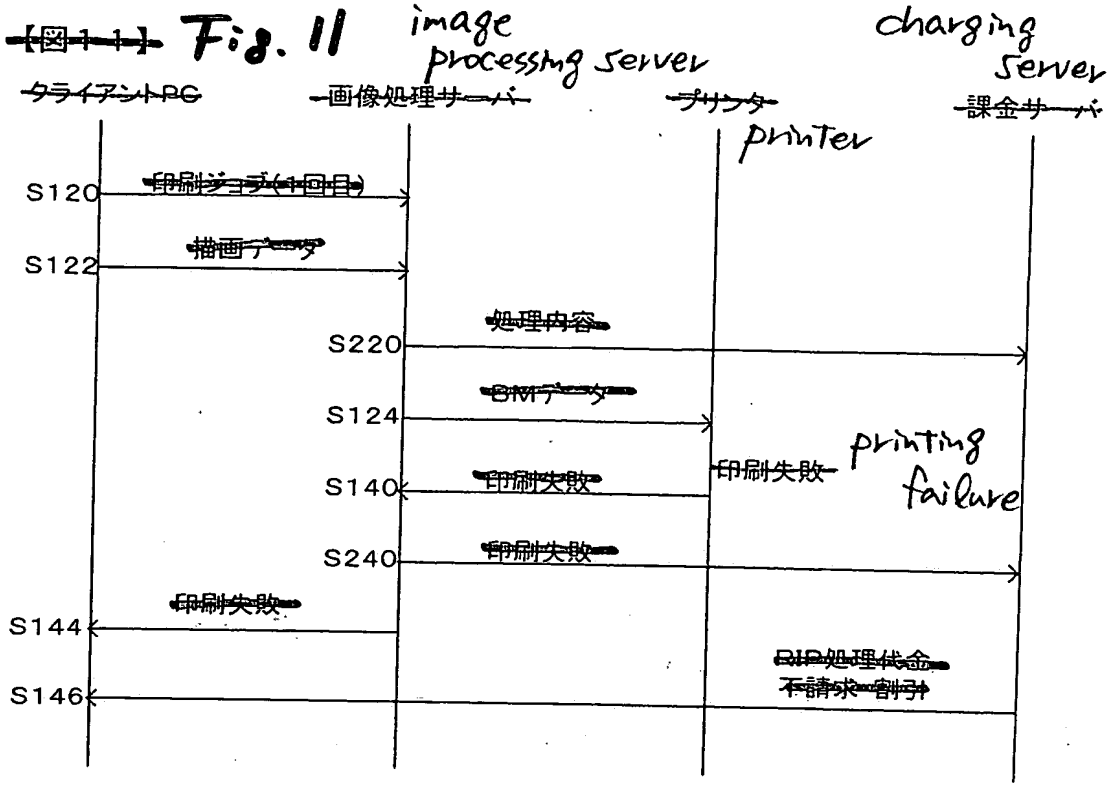
S126 printing success

S222 printing success

S130 printing success

S132 charging for a predetermined fee

【図11】 Fig. 11



印刷失敗S24

Fig. 11

S120 print job (first time)

S122 drawing data

S220 processing content

S124 bitmap data

S140 printing failure

S240 printing failure

S144 printing failure

S146 not-charging or discounting an accounting for RIP processing

~~【図12】~~

Fig. 12

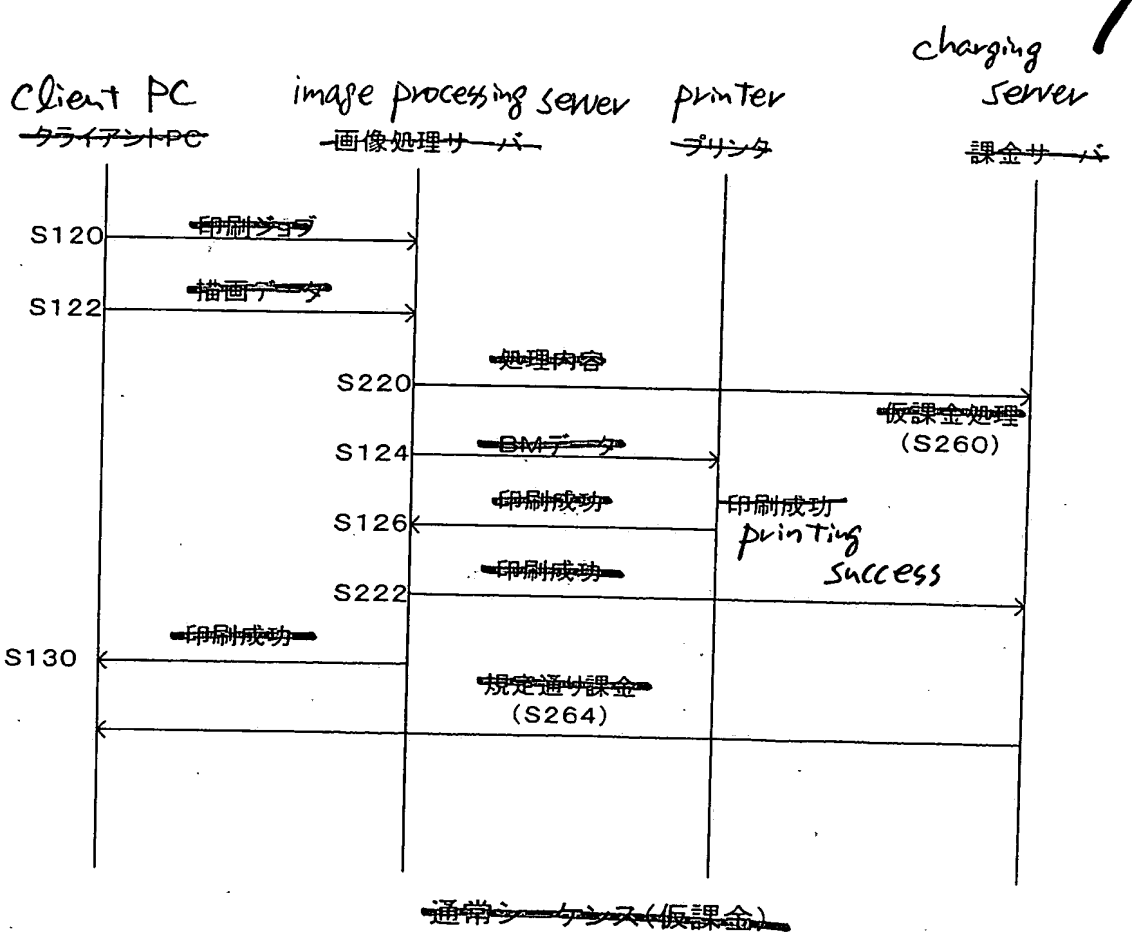

client PC
~~クライアントPC~~
image processing server
~~画像処理サーバ~~
printer
~~プリンタ~~
charging server
~~課金サーバ~~
S120
~~印刷ジョブ~~
S122
~~描画データ~~
~~処理内容~~
S220
~~仮課金処理~~
(S260)
S124
~~BMデータ~~
~~印刷成功~~
S126
印刷成功
printing success
~~印刷成功~~
S222
~~印刷成功~~
S130
~~規定通り課金~~
(S264)
~~通常シーケンス(仮課金)~~
S26

Fig. 12

S120 print job

S122 drawing data

S220 processing content

S260 provisional charging processing

S124 bitmap data

S126 printing success

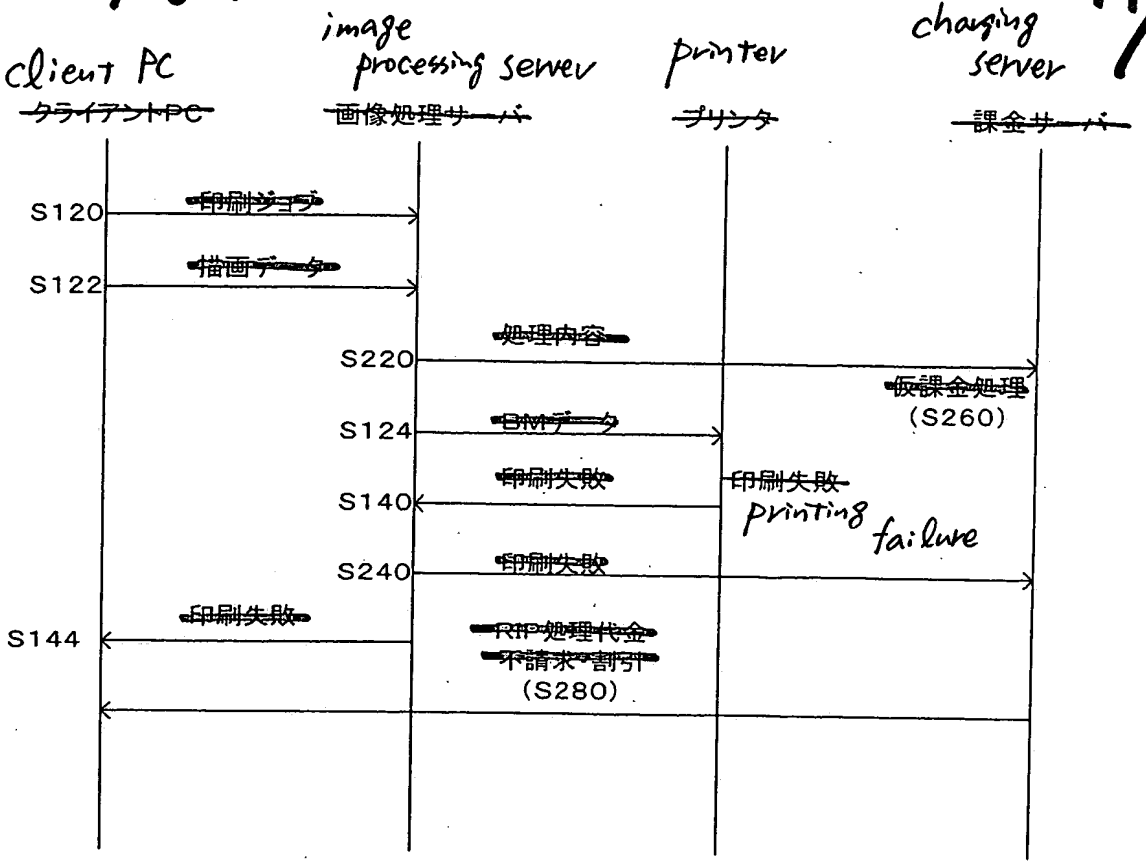
S222 printing success

S130 printing success

S264 charging for a predetermined fee

~~【図13】~~

Fig. 13



~~通常シーケンス(仮課金)~~

S28

Fig. 13

S120 print job

S122 drawing data

S220 processing content

S260 provisional charging processing

S124 bitmap data

S140 printing failure

S240 printing failure

S144 printing failure

S280 not-charging or discounting an accounting for RIP processing

~~【図14】~~

Fig. 14

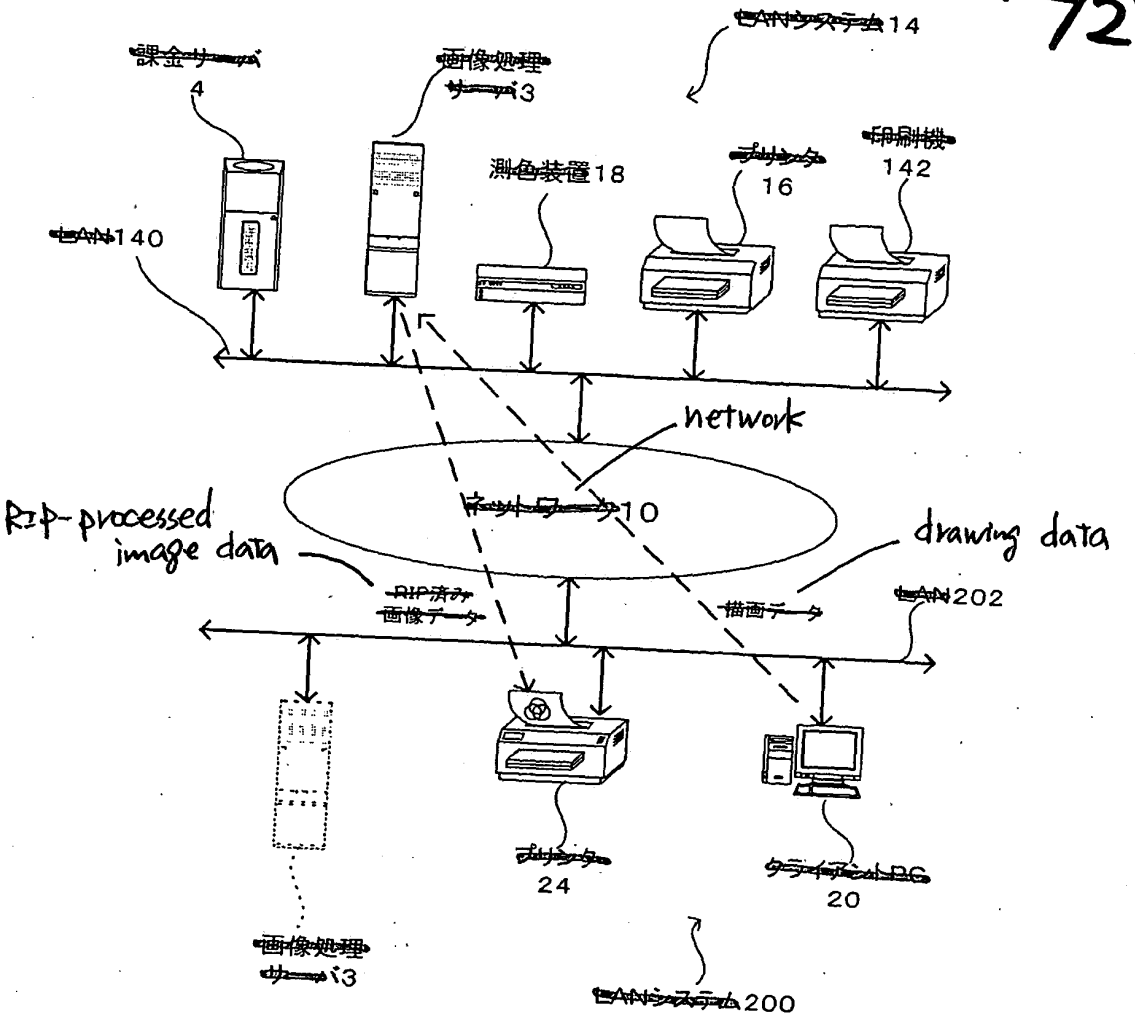

~~課金サーバ~~
4
~~画像処理サーバ~~
3
~~印刷システム~~14
測色装置18
~~プリンタ~~
16
~~印刷機~~
142
~~LAN~~140
network
~~ネットワーク~~10
RIP-processed image data
drawing data
~~RIP済み画像データ~~
~~描画データ~~
~~LAN~~202
~~プリンタ~~
24
~~クライアントPC~~
20
~~画像処理サーバ~~
3
~~LANシステム~~200
~~印刷システム~~2

Fig. 15

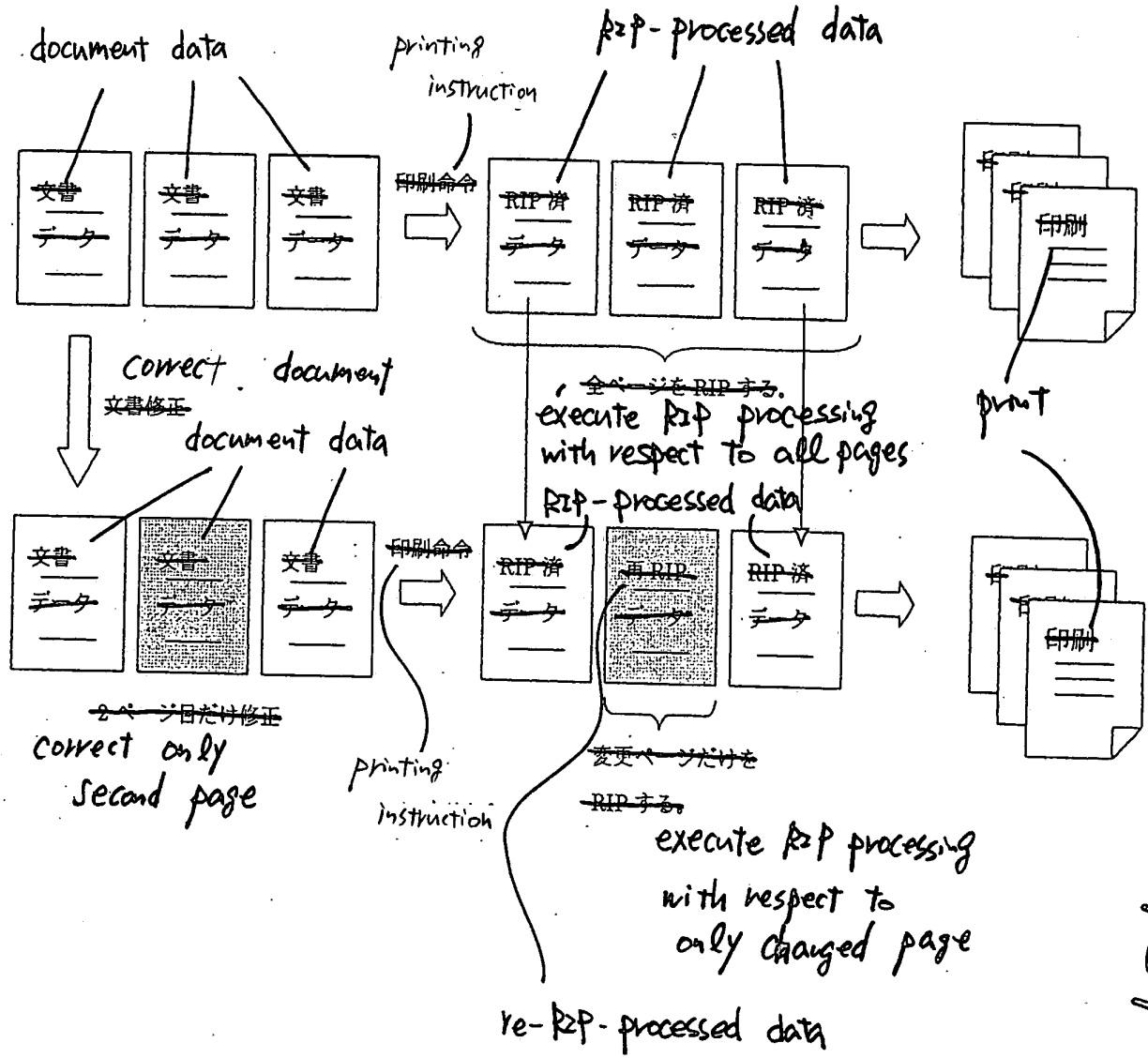
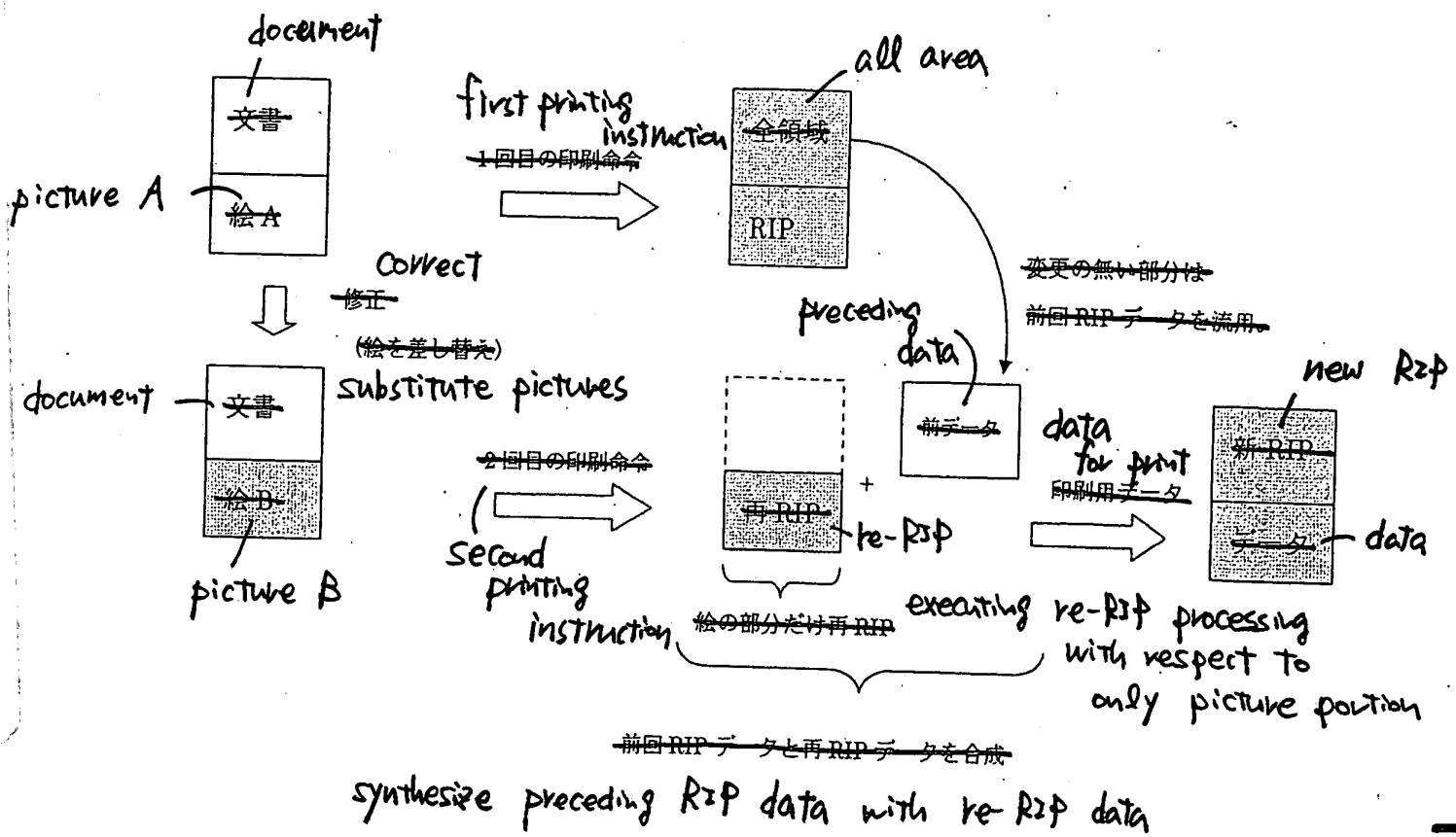
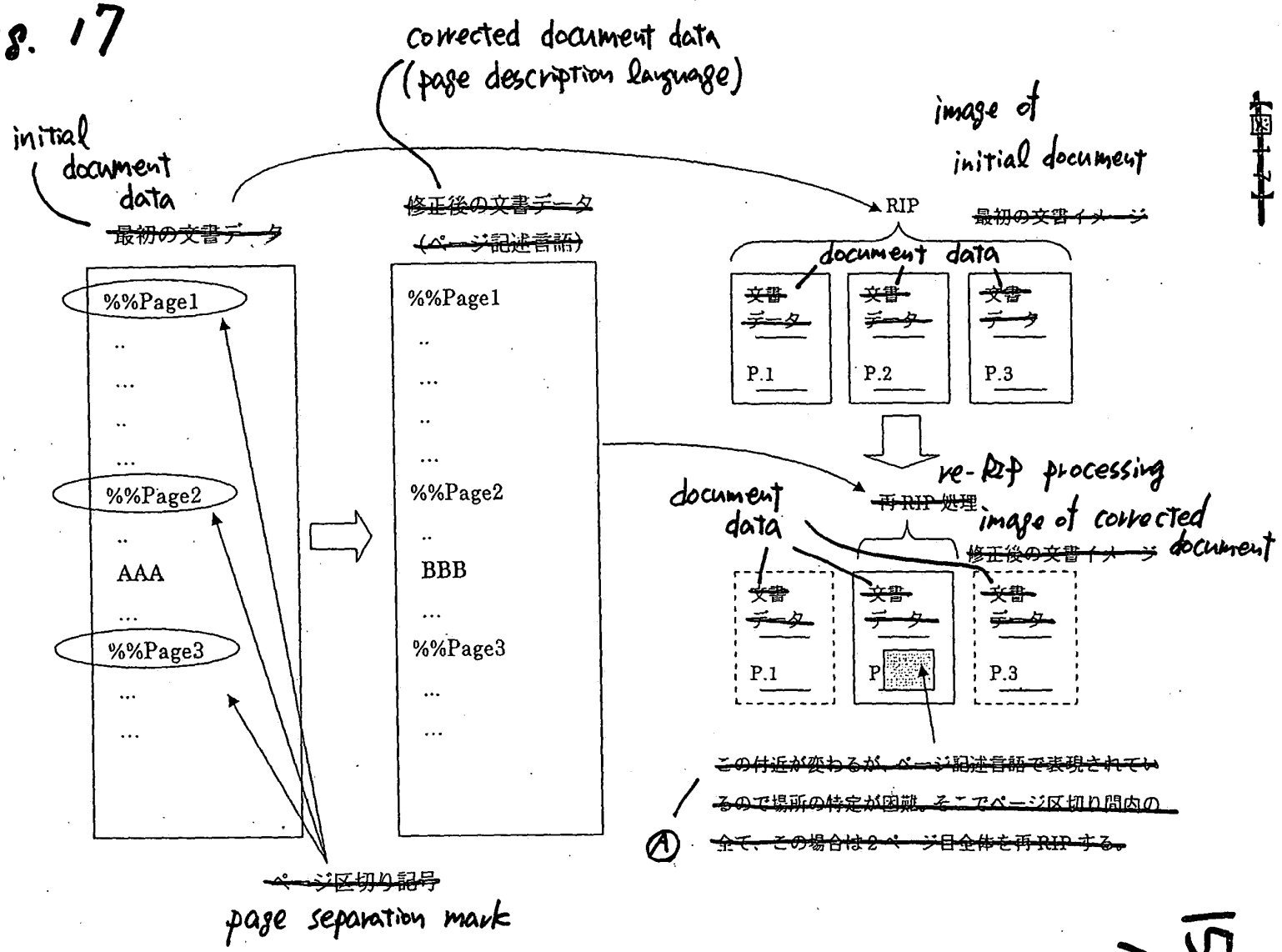

document data
printing instruction
RIP-processed data
correct document
execute RIP processing with respect to all pages
print
document data
correct only second page
printing instruction
execute RIP processing with respect to only changed page
re-RIP-processed data

Fig. 16


document
文書
picture A
絵A
first printing instruction
1回目の印刷命令
all area
全領域
RIP
correct
修正
(絵を差し替え)
substitute pictures
document
文書
絵B
picture B
変更の無い部分は
前回RIPデータを流用。
preceding data
前データ
new RIP
data for print
印刷用データ
新RIP
データ
data
second printing instruction
2回目の印刷命令
再RIP
re-RIP
絵の部分だけ再RIP
executing re-RIP processing with respect to only picture portion
前回RIPデータと再RIPデータを合成
synthesize preceding RIP data with re-RIP data

14/27

Fig. 17

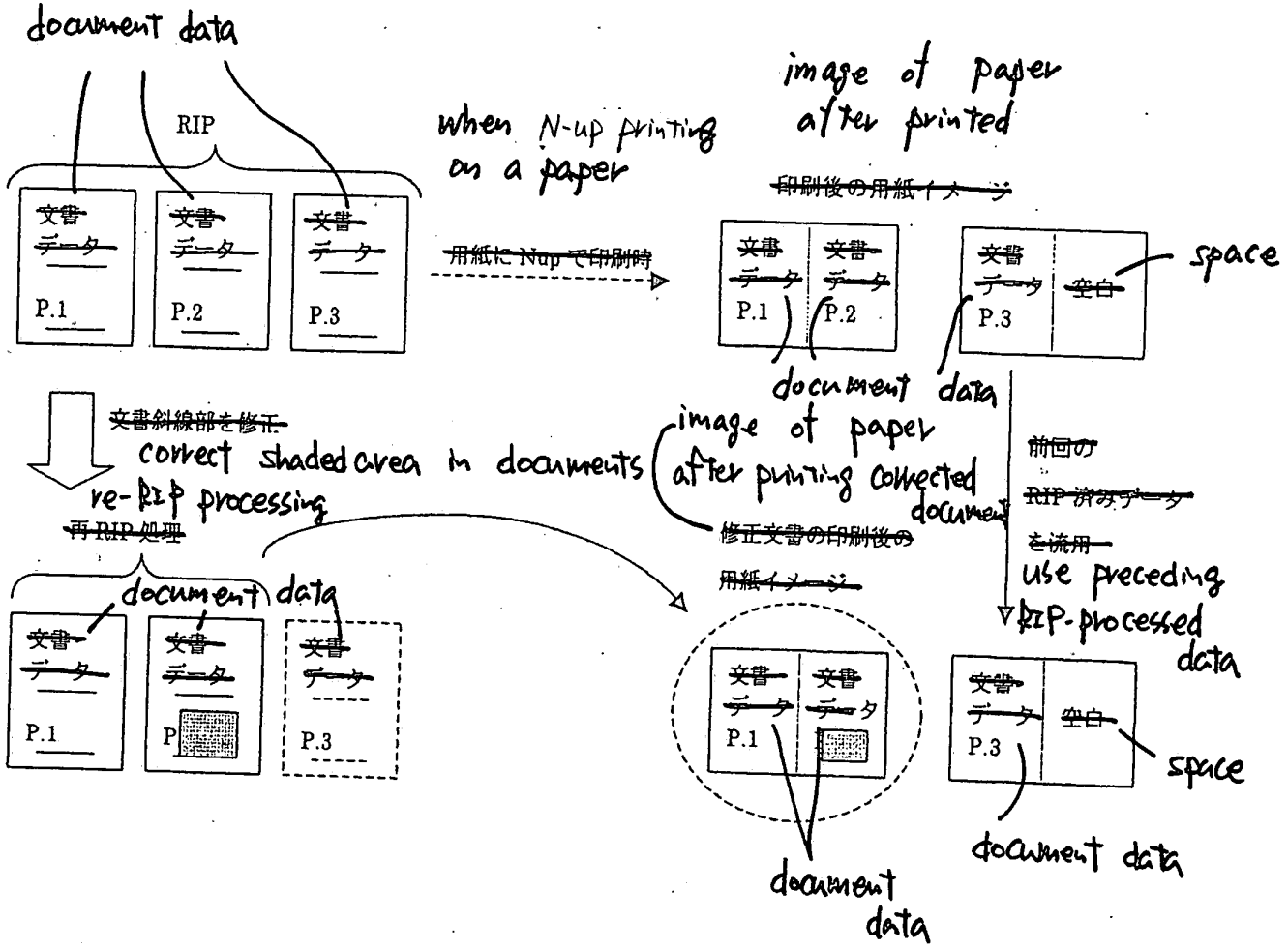

corrected document data
(page description language)
initial document data
最初の文書データ
修正後の文書データ
(ページ記述言語)
image of initial document
最初の文書イメージ
RIP
document data
%%Page1
%%Page2
AAA
%%Page3
BBB
P.1
P.2
P.3
re-RIP processing
再RIP処理
image of corrected document
修正後の文書イメージ
ページ区切り記号
page separation mark
この付近が変わるが、ページ記述言語で表現されてい
るので場所の特定が困難。そこでページ区切り間内の
全て、その場合は2ページ目全体を再RIPする。
Ⓐ

15/27

Fig. 17

(A) Although this area is changed, it is difficult to specify a position. This is because the document data is expressed in the page description language. Therefore, the re-RIP processing is executed with respect to all portions between page separation marks (in this case, entire second page).

Fig. 18

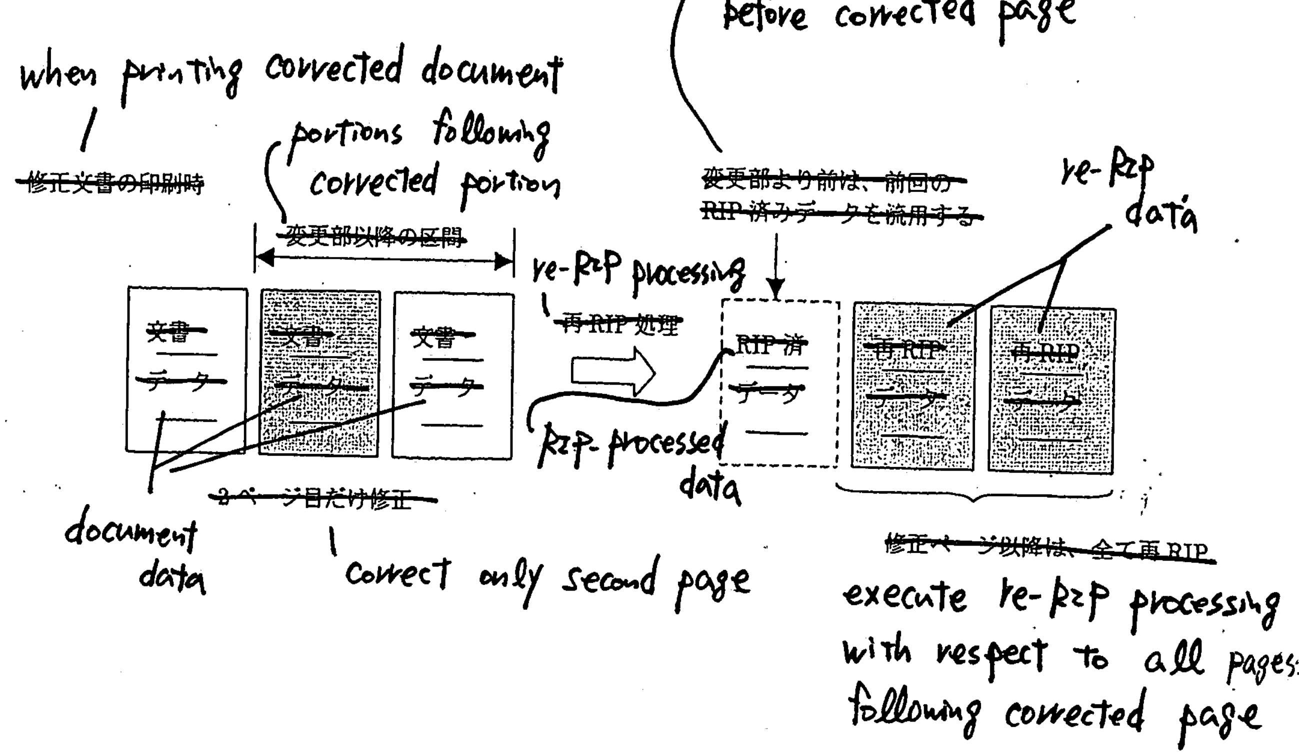


【図18】

12/19

【図19】

Fig. 19


when printing corrected document
修正文書の印刷時
portions following corrected portion
変更部以降の区間
文書
データ
document data
2ページ目だけ修正
correct only second page
re-RIP processing
再RIP処理
RIP-processed data
RIP済
use preceding RIP-processed data before corrected page
変更部より前は、前回の
RIP済みデータを流用する
re-RIP data
再RIP
修正ページ以降は、全て再RIP
execute re-RIP processing with respect to all pages following corrected page

~~[図2-0]~~

Fig. 20

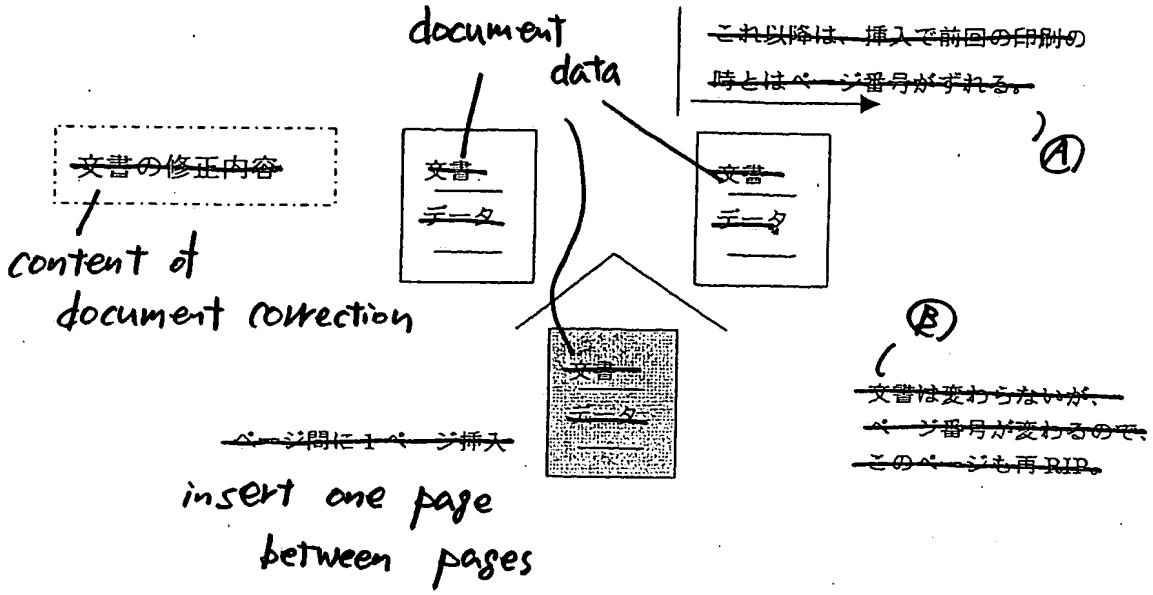
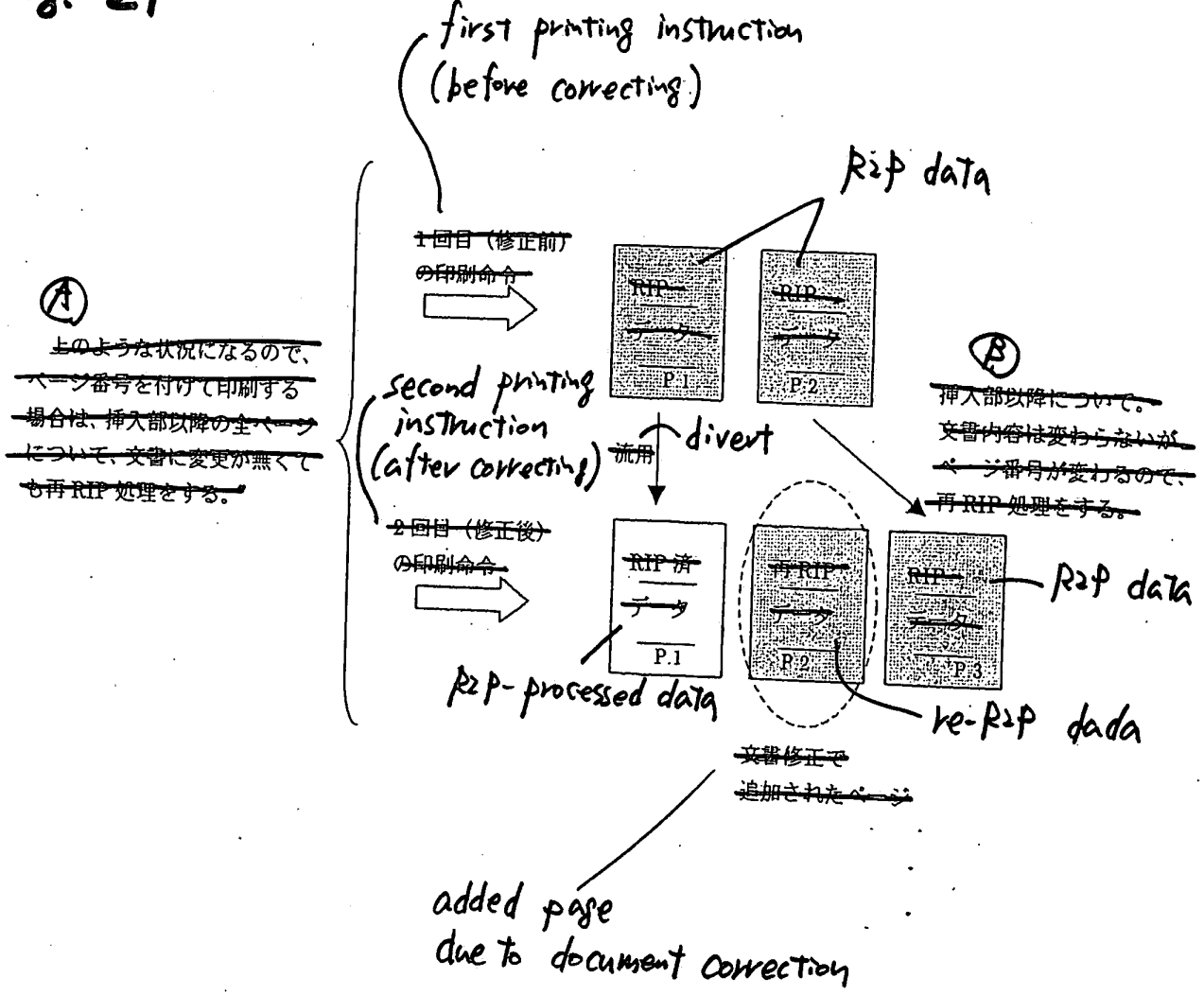

document data
~~文書の修正内容~~
content of document correction
~~文書~~
~~データ~~
~~文書~~
~~データ~~
~~これ以降は、挿入で前回の印刷の時とはページ番号がずれる。~~
Ⓐ
Ⓑ
~~文書は変わらないが、ページ番号が変わるので、このページも再RIP。~~
~~文書~~
~~データ~~
~~ページ間に1ページ挿入~~
insert one page between pages

Fig. 20

(A) After here, insertion causes page numbers to be different from those at a time of preceding printing

(B) Although document is not changed, page numbers are changes. Therefore, re-RIP processing is also executed with respect to this page.

Fig. 21


first printing instruction
(before correcting)
R2P data
1回目（修正前）
の印刷命令
RIP
データ
P.1
RIP
データ
P.2
Ⓐ
上のような状況になるので、
ページ番号を付けて印刷する
場合は、挿入部以降の全ページ
について、文書に変更が無くて
も再RIP処理をする。
second printing
instruction
(after correcting)
流用
divert
Ⓑ
挿入部以降について、
文書内容は変わらないが
ページ番号が変わるので、
再RIP処理をする。
2回目（修正後）
の印刷命令
RIP 済
データ
P.1
再RIP
データ
P.2
RIP
データ
P.3
R2P data
R2P-processed data
re-R2P data
文書修正で
追加されたページ
added page
due to document correction

【図21】

Fig. 21

(A) Since situation becomes as shown in right portion, in a case of printing with adding a page number, re-RIP processing is executed with respect to all pages following an inserted portion even without correcting document.

(B) With regard to portions following the inserted portion, document content is not changed. However, since page numbers are changed, re-RIP processing is executed.

~~【図22】~~

Fig. 22

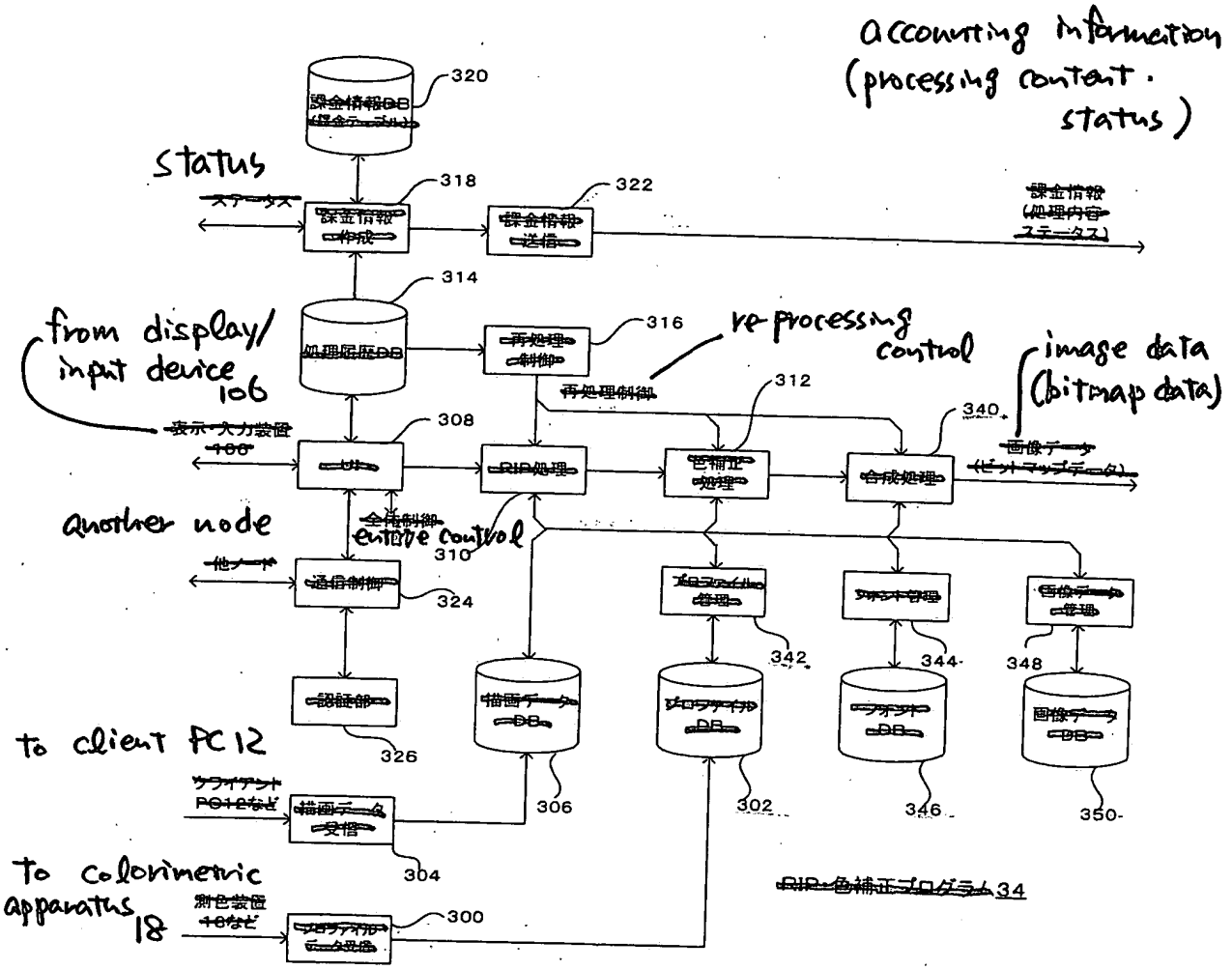

accounting information (processing content · status)
320
課金情報DB
status
ステータス
318
課金情報作成
322
課金情報送信
課金情報(処理内容ステータス)
314
処理履歴DB
316
再処理制御
re-processing control
from display/input device 106
表示・入力装置108
308
RIP処理
312
色補正処理
340
合成処理
image data (bitmap data)
画像データ(ビットマップデータ)
another node
他ノード
全体制御
entire control
310
通信制御
324
342
344
348
認証部
326
描画データDB
306
ビットデータDB
302
フォントDB
346
画像データDB
350
to client PC 12
クライアントPC12など
描画データ受信
304
to colorimetric apparatus 18
測色装置18など
300
RIP・色補正プログラム34

Fig. 22

300 profile data receiving section
302 profile DB
304 drawing data receiving section
306 drawing data DB
308 user interface section
310 RIP processing section
312 color correcting processing section
314 process history DB
316 re-processing control section
318 accounting information generating section
320 accounting information DB
322 accounting information transmitting section
324 communication control section
326 authentication section
340 synthesizing processing section
342 profile managing section
344 font managing section
346 font DB
348 image data managing section
350 image data DB

【図2-3】

Fig. 23

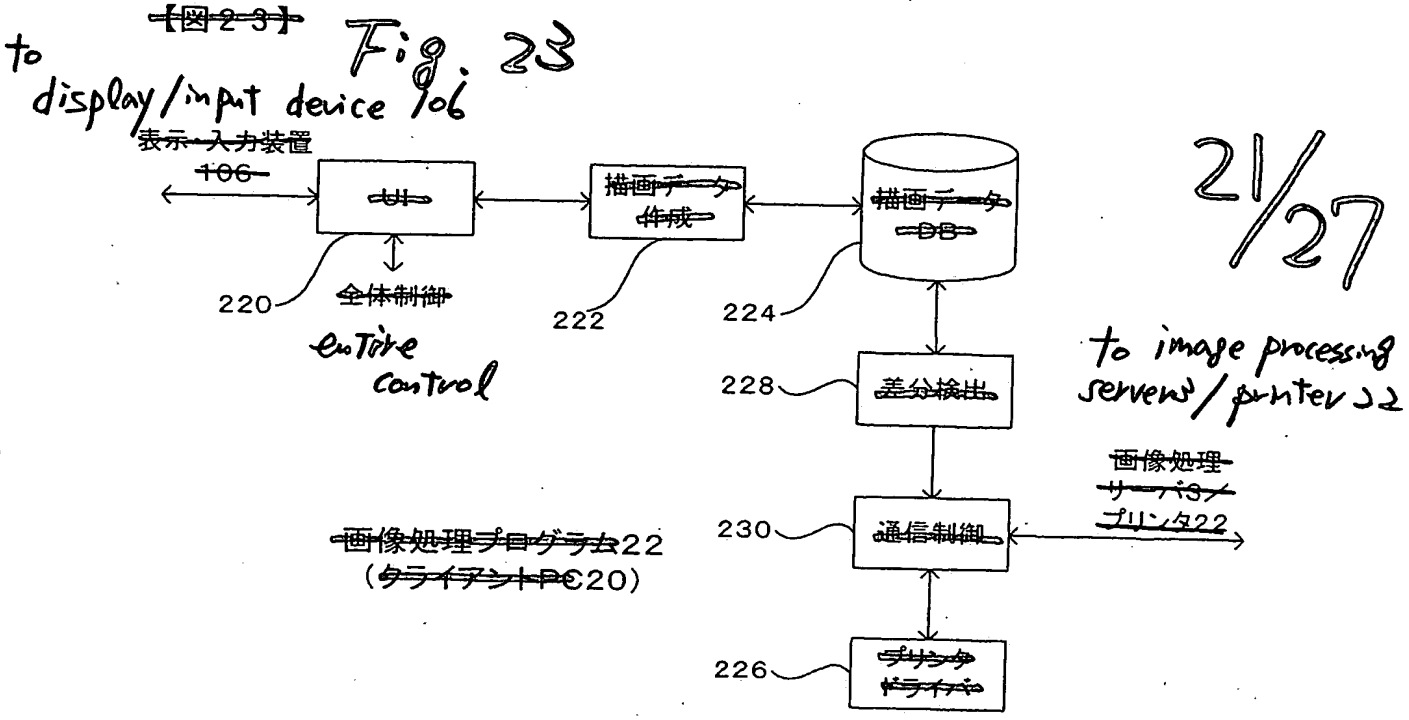


Fig. 24

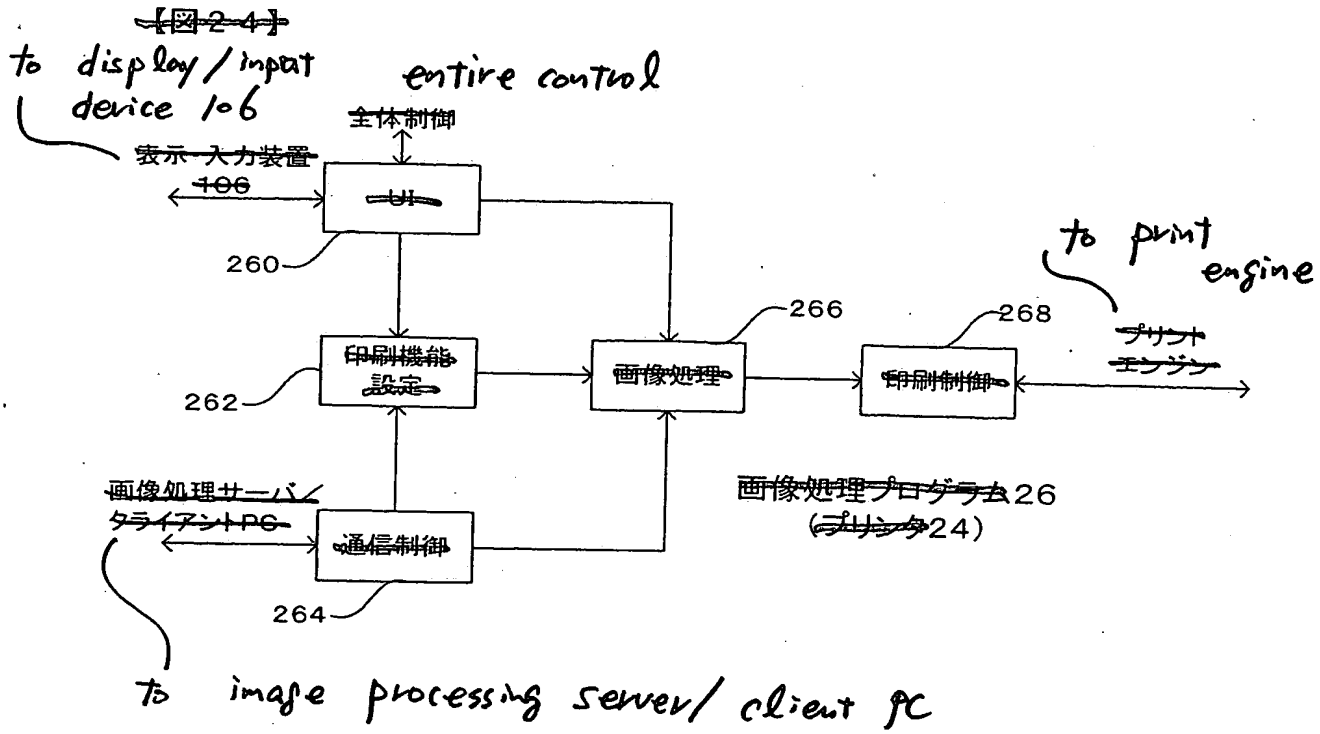


Fig. 23

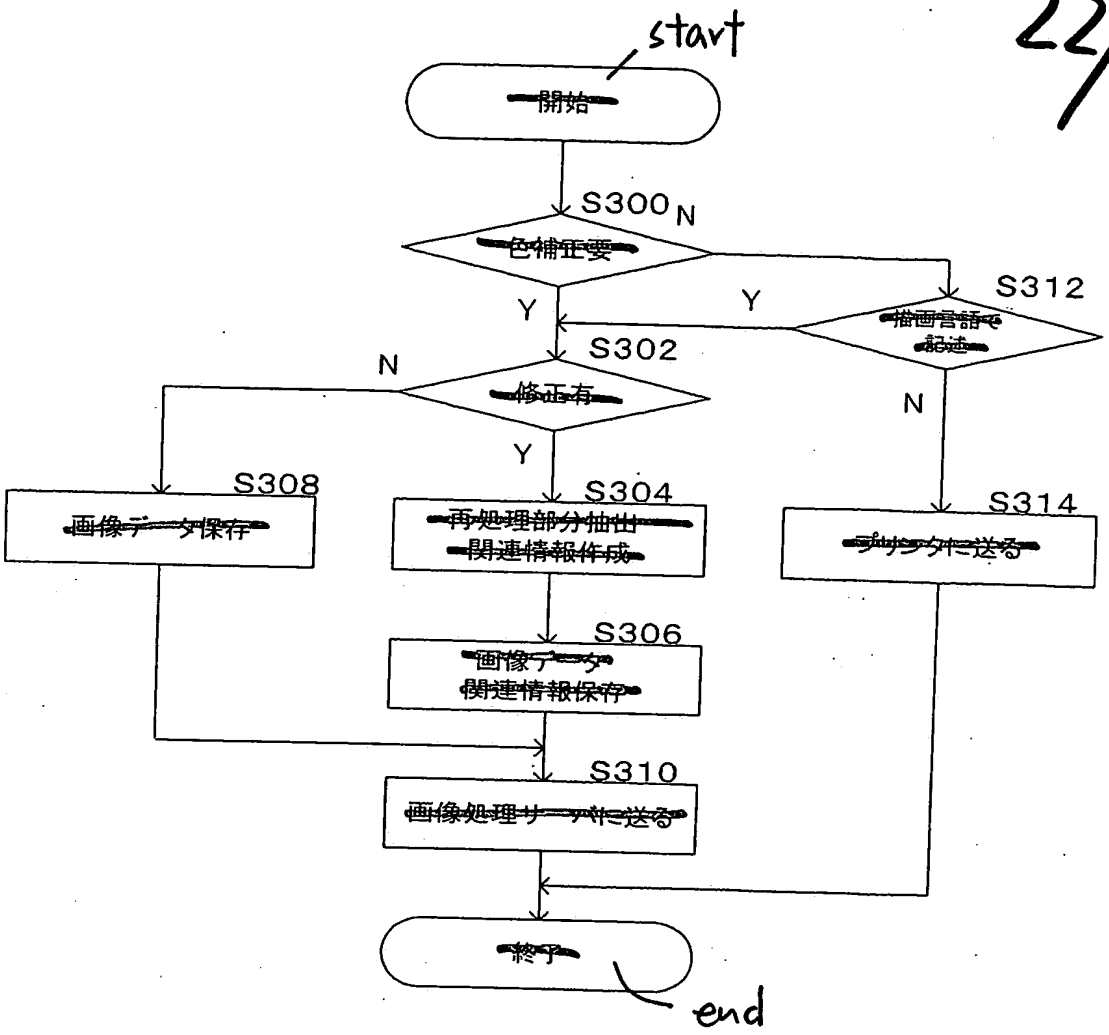
220 UI section
222 drawing data generating section
224 image data DB
228 difference detecting section
230 communication control section
226 printer driver section

Fig. 24

260 UI section
262 printing function setting section
264 communication control section
266 image processing section
268 print control section

~~【図25】~~

Fig. 25



~~クライアントPC側処理~~
(S30)

Fig. 25

S300 Is it necessary to execute color correcting processing?

S302 corrected?

S304 extract re-processed portion/generate related information

S306 store image data/related information

S308 store image data

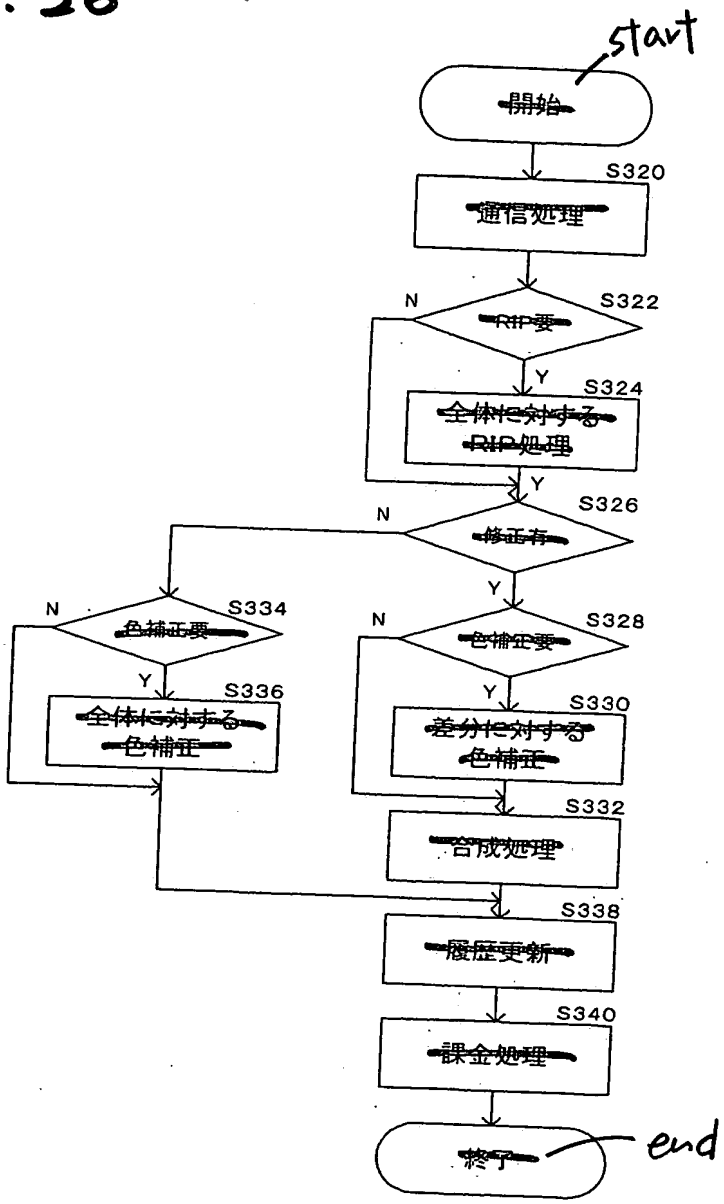
S310 transmit to image processing server

S312 describe in drawing language

S314 transmit to printer

~~[図26]~~

Fig. 26



~~画像処理サーバ側処理~~
(S32)

Fig. 26

S320 communication processing

S322 Is it necessary to execute RIP processing?

S324 execute RIP processing with respect to entirety

S326 corrected?

S328 Is it necessary to execute color correcting processing?

S330 execute color correcting processing with respect to difference

S332 synthesizing processing

S334 Is it necessary to execute color correcting processing?

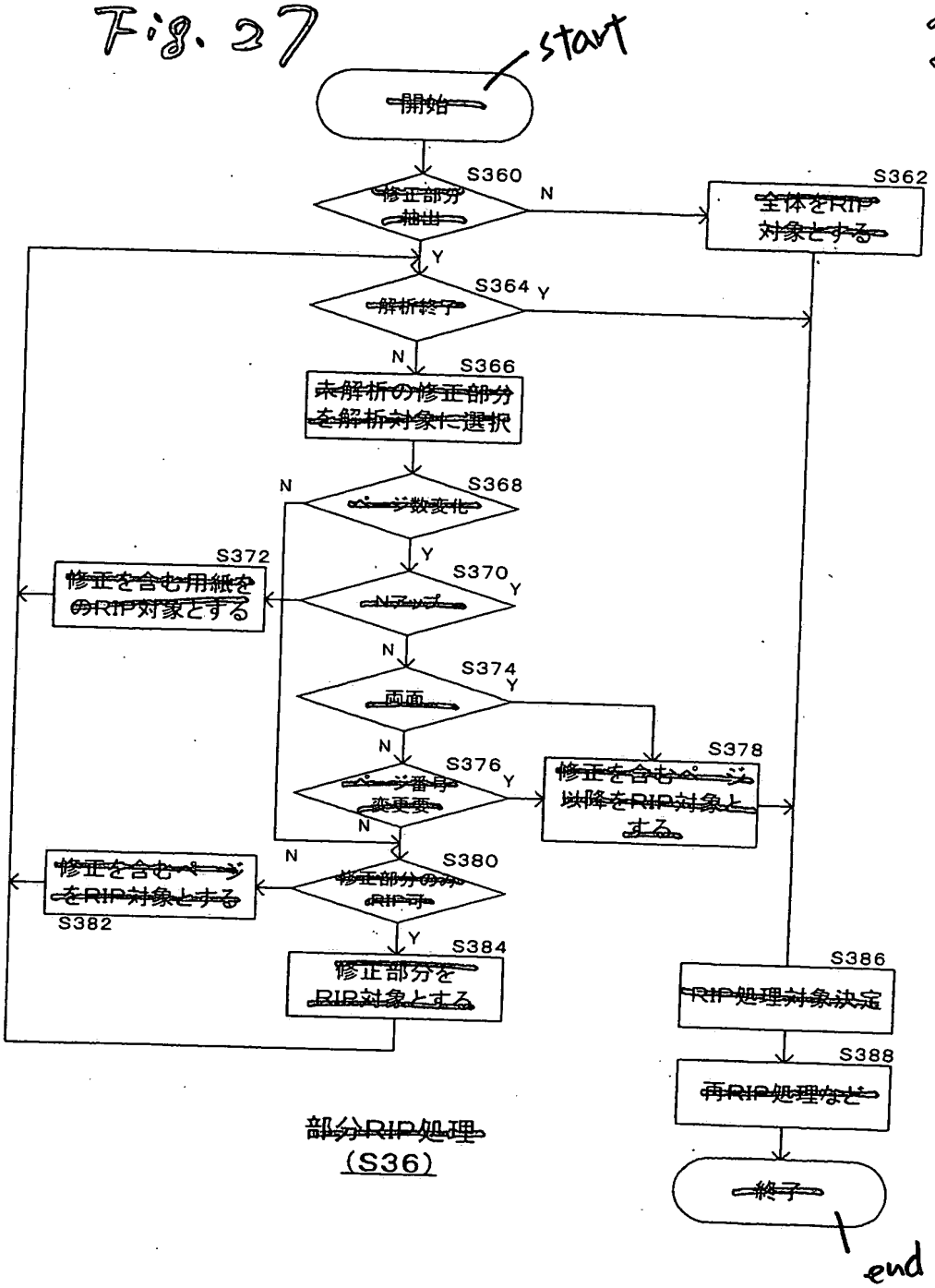
S336 execute color correcting processing with respect to entirety

S338 update history

S340 charging processing

【図27】

Fig. 27



部分RIP処理
(S36)

Fig. 27

S360 extract correcting portion

S362 set entirety as a target of RIP processing

S364 is analysis completed?

S366 select unanalyzed correcting portion as a analysis target

S368 is page number changed?

S370 N-up printing?

S372 set a paper containing correction as a target of RIP processing

S374 double-side printing?

S376 is it necessary to change page number?

S378 set all pages following a page containing correction as a target of RIP processing

S380 Is it possible to execute RIP processing with respect to only correcting portion?

S382 set page containing correction as a target of RIP processing

S384 set correcting portion as a target of RIP processing

S386 determine target of RIP processing

S388 execute re-RIP processing

~~【図28】~~

Fig. 28

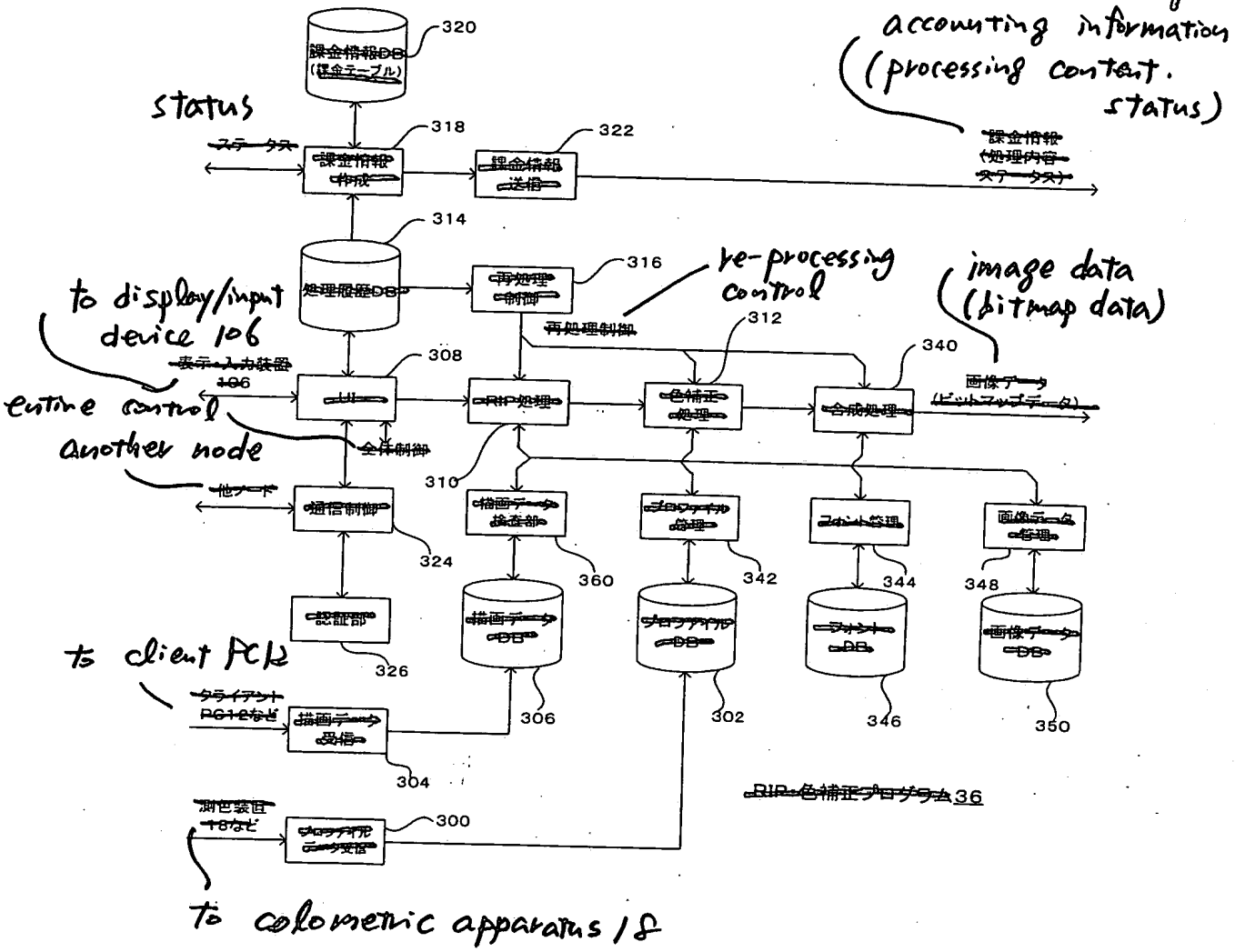

~~課金情報DB~~ (~~課金テーブル~~)
320
status
~~ステータス~~
318
~~課金情報~~ ~~作成~~
322
~~課金情報~~ ~~送信~~
accounting information (processing content. status)
~~課金情報~~ (~~処理内容~~ ~~ステータス~~)
314
~~処理履歴DB~~
316
~~再処理~~ ~~制御~~
re-processing control
~~再処理制御~~
image data (bitmap data)
312
340
to display/input device 106
~~表示・入力装置~~ 106
308
~~UI~~
~~RIP処理~~
~~色補正~~ ~~処理~~
~~合成処理~~
~~画像データ~~ (~~ビットマップデータ~~)
entire control
~~全体制御~~
another node
~~他ノード~~
310
~~通信制御~~
~~描画データ~~ ~~生産部~~
~~プロファイル~~ ~~処理~~
~~フォント管理~~
~~画像データ~~ ~~管理~~
324
360
342
344
348
~~認証部~~
~~描画データ~~ ~~DB~~
~~プロファイル~~ ~~DB~~
~~フォント~~ ~~DB~~
~~画像データ~~ ~~DB~~
326
306
302
346
350
to client PC
~~クライアント~~ PC1・2など
~~描画データ~~ ~~受信~~
304
~~RIP・色補正プログラム~~ 36
~~測色装置~~ ~~I/Fなど~~
~~プロファイル~~ ~~データ受信~~
300
to colorimetric apparatus I/F

Fig. 28

300 profile data receiving section
302 profile DB
304 drawing data receiving section
306 drawing data DB
308 user interface section
310 RIP processing section
312 color correcting processing section
314 process history DB
316 re-processing control section
318 accounting information generating section
320 accounting information DB
322 accounting information transmitting section
324 communication control section
326 authentication section
340 synthesizing processing section
342 profile managing section 342
344 font managing section
346 font DB
348 image data managing section
350 image data DB

~~【図２９】~~

Fig. 29

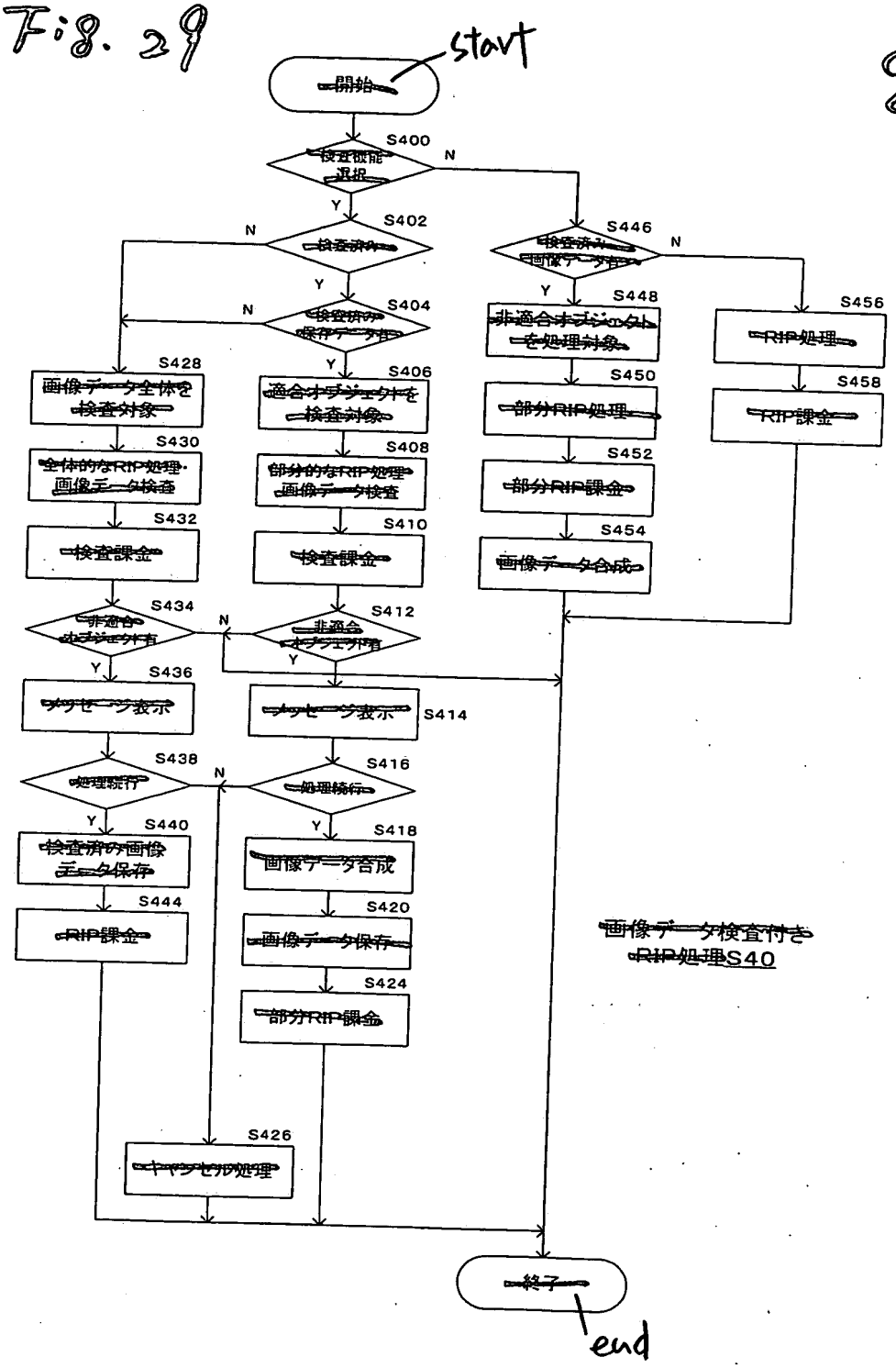

~~開始~~
start
S400
~~検査機能選択~~
N
Y
S402
~~検査済み~~
N
Y
S404
~~検査済み保存データ有~~
N
Y
S446
~~検査済み画像データ有~~
N
Y
S428
~~画像データ全体を検査対象~~
S430
~~全体的なRIP処理・画像データ検査~~
S432
~~検査課金~~
S434
~~非適合オブジェクト有~~
N
Y
S436
~~メッセージ表示~~
S438
~~処理続行~~
N
Y
S440
~~検査済み画像データ保存~~
S444
~~RIP課金~~
S406
~~適合オブジェクトを検査対象~~
S408
~~部分的なRIP処理・画像データ検査~~
S410
~~検査課金~~
S412
~~非適合オブジェクト有~~
N
Y
S414
~~メッセージ表示~~
S416
~~処理続行~~
N
Y
S418
~~画像データ合成~~
S420
~~画像データ保存~~
S424
~~部分RIP課金~~
S448
~~非適合オブジェクトを処理対象~~
S450
~~部分RIP処理~~
S452
~~部分RIP課金~~
S454
~~画像データ合成~~
S456
~~RIP処理~~
S458
~~RIP課金~~
S426
~~キャンセル処理~~
~~終了~~
end
~~画像データ検査付きRIP処理~~S40

Fig. 29

S400 select checking function

S402 checked?

S404 is checked data stored?

S406 select print applicable object as a checking target

S408 execute partial RIP processing/check image data

S410 charge for checking

S412 is print inapplicable object detected?

S414 display message

S416 continue processing?

S418 synthesize image data

S420 store image data

S424 charging for partial RIP processing

S426 cancel processing

S428 select entire image data as checking target

S430 execute entire RIP processing/check image data

S432 charge for checking

S434 is print inapplicable object detected?

S436 display message

S438 continue processing?

S440 store checked image data

S444 charging for RIP processing

S446 is checked data stored?

S448 select print inapplicable object as processing target

S450 execute partial RIP processing

S452 charge for partial RIP processing

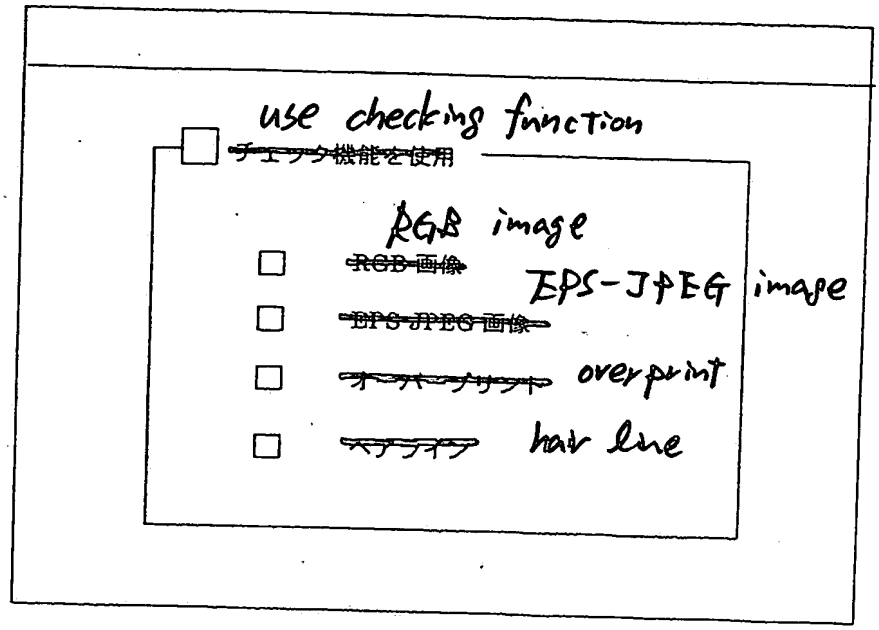
S454 synthesize image data

S456 execute RIP processing

S458 charge for RIP processing

~~【図30】~~

Fig. 30



~~【図31】~~ Fig. 31

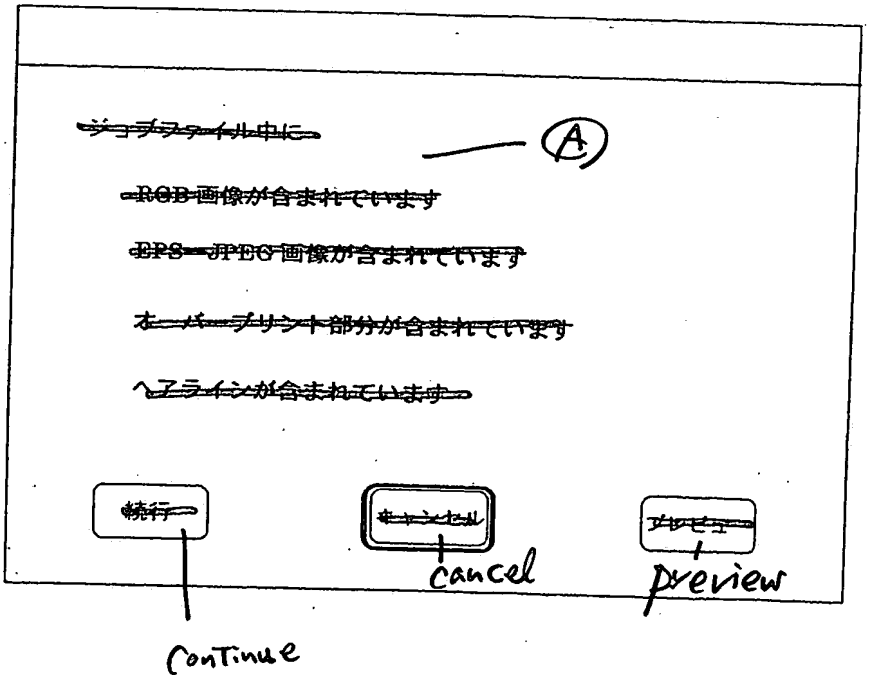


Fig. 31

Job file includes

an RGB image,

an EPS-JPEG image,

an overprinting portion, and

a hair line.